

UNIVERSIDADE DE LISBOA  
FACULDADE DE PSICOLOGIA



**The Mediator Role of Family to Work Enrichment on the Quality of  
the Sibling Relationship and Social-Affective Work Domain  
Variables - an Exploratory Study**

**Beatriz de Araújo Nobre Duarte Vitória**

**MESTRADO INTEGRADO EM PSICOLOGIA**

**(Secção de Psicologia Clínica e da Saúde / Núcleo de Psicologia Clínica  
Sistémica)**

**2018**

UNIVERSIDADE DE LISBOA FACULDADE DE PSICOLOGIA



**The Mediator Role of Family to Work Enrichment on the Quality of  
the Sibling Relationship and Social-Affective Work Domain  
Variables - an Exploratory Study**

**Beatriz de Araújo Nobre Duarte Vitória**

**Dissertação orientada pela Prof. Doutora Maria Teresa Ribeiro**

**MESTRADO INTEGRADO EM PSICOLOGIA**

**(Secção de Psicologia Clínica e da Saúde / Núcleo de Psicologia Clínica  
Sistémica)**

**2018**

## Acknowledgments

*Firstly, my sincere thanks go to Professor Teresa, for all the emotional support and for all the opportunities I was trusted. I truly appreciate how you steered me in the right direction, allowing me all the freedom write this thesis from what my mind was steaming.*

*I would also like to thank Professor Marta for keeping the door open to my emergencies' bad timing and for facilitating the makeover of my disorganised ideas into an organised research design.*

*To Professor Célia, I would like to express all my gratitude for helping and guiding me on the journey throughout the world of statistics.*

*To APFN, specially to Ana Cid, I cannot thank enough for the partnership, the curiosity on the topic and for the confidence placed in my work, both in Lisbon and Bellaria.*

*I would also like to thank to Carolina, for making herself so available, for sharing with me the first-time-adventure of planning and conducting a workshop on the mind-blowing topic of family-work enrichment and for rooting for me!*

*During my master's degree, I was fortunate to have crossed paths with Professor Isabel, Professor Carla, Professor Luana, Professor Marta and Professor Teresa. All the professors from Systemic Psychology have within them at least one feature I aspire to achieve during my soon to start career. All of you have inspired me somehow by presenting me five unique ways to do psychology. Thank you for all the knowledge passed in each and every class.*

*Thank you to all the participants who have granted their time to answer all the five scales. Without your good will I could not have ever drawn all these conclusions.*

*To my parents, thank you from somehow influencing me on the decision of also becoming a psychologist. Perhaps it is in our genes, perhaps it was an unconscious influence, nonetheless you both must have had a role here. Dad, thank you for all your feedback in what regards the research world. Mum, thank you for the help, the motivation boots and all the proofreading. Maria, thank you for the exciting task of checking all my references and citations. To grandad,*

*thank you for all the suggestions of people I could bug to answer the scales and for activating all your network just to help me finding participants. To grandma, thank you for all your random calls and texts during the last 4 months wishing me inspiration and productivity. Maria and Zé, for some reason I must have decided to include siblings as a variable of interest here, so thank you. Finally, to my three amazing cousins, aunt and uncle, thank you for cheering up for me!*

*Last but not least, a million thanks to each and every of my friends, specially to the ones who would join me for study session! Cannot express how much I appreciate the love and pep talks, despite the fact I have entered a social alienation mode recently. To my best friends since I am 3 years old: Metas (who I no longer know if I should think of you as sister or as a friend) and Sara (birds of a feather flock together, right?). To Mads, for joining me in all my crazy ideas, for coming up with even crazier ones and for the absence of filters. To Zé Maria, for the companionship and the mutual therapy sessions. To “As Minhas Amigas”, “Divinas”, “Porildas”, “Amiguinhas Psicológicas”, “Pura Poesia”, all the friends from Maasi and Zagreb, and “Psychomates”, thank you so much!*

## **Abstract**

Nowadays it has become clear the family and work domains are tightly inter-related and how this interface generates benefits at the individual, familial and organisational level. Henceforth, with the aim to expand the empirical knowledge regarding the link between family and work variables, the links between the quality of the sibling relationship, family-to-work enrichment and social-affective workplace variables (team functioning at the social and task reflexivity level as well as affective commitment to the enterprise) were explored. The results demonstrated while family-to-work enrichment is a mediator between a positive quality of the sibling relationship and workplace social-affective variables, family-to-work enrichment has a complex role on a negative sibling relationship and social-affective workplace variables. In fact, it is unclear whether family-to-work enrichment mediates a negative sibling relationship and social reflexivity. A negative sibling relationship solely produces a direct effect on task reflexivity. Finally, a negative sibling relationship shows no effect on affective commitment. Research and practical implications are discussed.

**Keywords:** Family-to-Work Enrichment, Quality Sibling Relationship, Social Reflexivity, Task Reflexivity, Affective Commitment

## **Resumo**

Recentemente, tornou-se claro que as esferas da família e do trabalho estão interrelacionadas e como esta interface gera benefícios, quer a nível individual, quer a nível familiar, quer a nível organizacional. Desta forma, com o objetivo de expandir o conhecimento empírico no que toca às associações entre as variáveis da família e do trabalho, a relação entre a qualidade da relação dos irmãos, enriquecimento família-trabalho e variáveis laborais socio-afetivas (funcionamento de equipas ao nível da reflexividade social e da reflexividade da tarefa bem como compromisso organizacional afetivo) foram exploradas. Os resultados evidenciam que, enquanto que o enriquecimento família-trabalho medeia uma relação positiva entre irmãos e as variáveis socio-afetivas laborais, o papel mediador do enriquecimento família-trabalho na relação negativa entre irmãos e as variáveis socio-afetivas laborais parece ser bastante complexo. De facto, os resultados não permitem clarificar se o enriquecimento família-trabalho medeia a associação entre uma relação fraternal negativa e as variáveis socio-afetivas laborais. Uma relação fraternal negativa apenas produz um efeito direto na reflexividade da tarefa. Por fim, uma relação fraternal negativa revela não ter efeito no compromisso organizacional. As implicações práticas para a psicologia aplicada e empíricas são discutidas.

**Palavras chave:** Enriquecimento Família-Trabalho, Qualidade da relação fraternal, Reflexividade Social, Reflexividade da Tarefa, Compromisso Afetivo.

## Table of Contents

1. INTRODUCTION .....	1
2. THEORETICAL FRAMEWORK .....	3
2.1. WORK FAMILY SPHERES .....	3
2.1.1. Work-Family Spheres in Portugal .....	3
2.1.2. Work-Family Interface.....	5
2.1.2.1. Work-Family Positive Synergies .....	6
2.2. SIBLING RELATIONSHIP.....	9
2.3. TEAM WORK .....	11
2.4. ORGANISATIONAL COMMITMENT.....	14
2.5. THE CURRENT STUDY .....	15
3. METHODOLOGICAL FRAMEWORK .....	17
3.1. MAIN AND SPECIFIC GOALS .....	17
3.2. CONCEPTUAL MAP .....	20
3.3. RESEARCH QUESTIONS.....	21
3.4. PROCEDURE .....	23
3.5. MEASURES .....	23
3.5.1. Socio-Demographic Questionnaire .....	24
3.5.2. Family-to-Work Enrichment (FWE).....	24
3.5.3. Quality of Sibling Relationship .....	25
3.5.4. Team Functioning .....	26
3.5.5. Affective Commitment .....	27
3.6. SAMPLE.....	27
3.7. CONTROL VARIABLES .....	29
3.8. STATISTICAL ANALYSIS .....	29
4. RESULTS .....	31
4.1. DESCRIPTIVE STATISTICS .....	31
4.2. DOES THE QUALITY OF THE SIBLING RELATIONSHIP RELATE TO FWE?.....	32
4.3. DOES FWE RELATE TO SOCIAL-AFFECTIVE WORK VARIABLES? .....	33

4.4. DOES THE QUALITY OF THE SIBLING RELATIONSHIP RELATE TO SOCIAL-AFFECTIVE WORK VARIABLES? .....	36
4.5. DOES FWE MEDIATE THE QUALITY OF THE SIBLING RELATIONSHIP AND SOCIAL-AFFECTIVE WORK VARIABLES?.....	39
5. DISCUSSION .....	43
5.1. DISCUSSION OUTLINE .....	43
5.2. STRENGTHS AND LIMITATIONS.....	47
5.3. IMPLICATIONS AND FUTURE DIRECTIONS .....	48
5.4. PRACTICAL IMPLICATIONS .....	49
6. CONCLUSION.....	50
7. REFERENCES .....	51
APPENDIXES .....	72
APPENDIX A .....	73
APPENDIX B .....	80
APPENDIX C .....	84
APPENDIX D .....	87
APPENDIX E.....	89
APPENDIX F.....	91
APPENDIX G .....	94
APPENDIX H .....	97
APPENDIX I.....	100
APPENDIX J .....	103
APPENDIX K .....	106



## Figures Index

Figure 1. Conceptual Map.....	21
Figure 2. Results Model.....	42

## **Table Index**

Table 1. Latent variables descriptive measures: Positive Sibling Relationship, Negative Sibling Relationship, FWE development, FWE affect, FWE Efficacy, Social Reflexivity Level, Task Reflexivity Level and Affective Commitment .....	31
--	----

## **Abbreviations List**

EST-Ecological Systems Theory

FWE- Family-to-Work Enrichment

POS- Positive Organisational Scholarship

RGD- Resource Grain Model

SET-Social Exchange Theory

WFE- Work-to-Family Enrichment

# 1. Introduction

*“Such research is recommended to increase our understanding of the conditions under which work and family are allies rather than enemies (Greenhaus & Powell, 2006, p. 88)”*

Ecological System's Theory has brought awareness to the fact human development is an outcome of social interaction between all the different contexts one takes part at. It has also been acknowledged all systems a person belongs to interact on an interrelated fashion (Bronfenbrenner, 1979). Consequently, systemic approaches have been flourishing in empirical psychology, on the grounds that it is paramount to understand how different systems interact (Bronfenbrenner, 1979). From all the systems a person belongs to, family and work will be highlighted throughout the present thesis. Mindful that approaches which direct the focus only on the individual level prevent a holistic understanding of social interactions (Waldegrave, 2009), the present study was designed.

In the recent years, the course of history has led to several changes on both family and work domains. For instance, in what regards Portuguese context, the workforce has a great number of female workers (Eurostat, 2008; INE, 2010) while the household responsibilities are still being divided over a traditionalist point of view (Fontaine, Andrade, Matias, Gato, & Mendonça, 2007; Vieira, Lopes, & Matos, 2014). Likewise, Portuguese women undergo more strain when compared to men (Aboim, 2010; Fontaine et al., 2007; Vieira et al., 2014). Nevertheless, if broader lenses are used, this scenario is also found outside the Portuguese context, as men's participation on the family sphere is still not sufficient for a shared even work-family time (Perista, Cardoso, Brázia, Abrantes, & Quintal, 2016). Social roles are tremendously central during adulthood (Frone, 2003). In fact, adults exert two types of roles: work roles and nonwork roles (Frone, 2003), henceforth, it is paramount to understand how work and family interact (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Grzywacz & Bass, 2003). As a matter of fact, successful integration of family and work is one of the primary tasks during young and middle adulthood (Lachman & Bonne-James, 1997).

Driven by the awareness of the challenges of experiencing family and work at its uttermost, and envisioning how family boosts the workplace, a literature review was conducted. Subsequently, it has been decided to study Family-to-Work Enrichment (FWE); a construct which

measures how being a family member boosts the quality of the life in the workplace (Greenhaus & Powell, 2006). To measure the construct the Portuguese version (Vieira et al., 2014) of Work Family Enrichment Scale - WFES - (Carlson et al., 2006) was applied.

After the first variable was defined, a literature gap was stumbled upon – the sibling relationship during adulthood. It is a hard to study and conceptualised this variable (Cicirelli, 1991), which might explain why other familial relationships have been more broadly studied compared to siblings (Conger & Little, 2010). Yet, the social skills which grow through the relationship between siblings (Alarcão, 2002; Fernandes, Alarcão, & Raposo, 2007; Ferreira, 2009) not only are an important family resources (Tucker, Holt, & Wiesen-Martin, 2013), but also can be used in other microsystems - for example the workforce (Carlson et al., 2006; Greenhaus & Powell, 2006). Consequently, it has been decided to also study the Quality of the Sibling Relationship, measuring this variable with Adult Sibling Relationship Questionnaire- ASRQ- original version by Lanthier and Stocker (1992) which was translated by Ferreira (2009).

Concurrently, the first question started to blossom – *Could it be that the sibling relationship is related to Family-to-Work Enrichment?*. A rather wide literature research was carried out and another literature gap was found, since, to our knowledge, no published studies have investigated the relationship between the sibling relationship and workplace variables.

By reflecting how today's workforce is shaped, organisational affective commitment and team functioning at the social and task reflexivity level arose as pertinent variables, which all three together have been labelled as social-affective work variables in the present work. In the light of Ecological System's Theory (Bronfenbrenner, 1986), Resource Gain Development Model (Wayne, Grzywacz, Carlson, & Kacmar, 2007; Hunter, Perry, Carlson, & Smith, 2010), Positive Organisational Scholarship (Cameron, Dutton, & Quinn, 2003) and Social Exchange Theory (Blau, 1964), the second and third research question came to light- *“Is it possible that FWE is related to social-affective work variables?”*- and – *“Perchance, does the Quality of The Sibling Relationship relate to social-affective work variables?”*. To measure Team Functioning, Portuguese translation (Curral, 2005) of Team Functioning Scale - TF - (Swift & West, 1998) was used. Plus, to measure Affective Commitment, the Portuguese version (Nascimento, Lopes, & Salgueiro, 2008) of Affective Commitment Scale - ACS (Meyer & Allen, 2007).

Anticipating the possible mediator role of FWE, a final research question was hypothesised - *Would FWE mediate the quality of the sibling relationship and social-affective work variables?”*.

Likewise, this thesis adopts an exploratory nature of the relationships regarding Family-to-Work Enrichment, the Quality of the Sibling Relationship, Team Functioning and Affective Commitment; the mediator role of FWE on the Quality of the Sibling Relationship (as independent/predictor variables) and Team Functioning plus Affective Commitment (as dependent/outcome variables). Due to the lack of literature on the matter, socio-demographic variables such as age, gender, tenure and sibship size have been controlled.

Bellow, five different sections will be found. Firstly, in the Theoretical Framework, a literature review can be read, where concepts are defined and related. After, on the Methodological Framework chapter, research design is dissected, as research questions, conceptual map, sample characterisation, measures applied, and research procedures are explained. Afterward, the results are described and analysed. Next, in the Discussion, the results are merged and reflected upon. Moreover, limitations of the present study are reported, in addition to practical and empirical implications, bearing in mind the results of the present study. On the last chapter, a global outline of the present thesis conclusions is presented.

## **2. Theoretical Framework**

### **2.1. Work Family Spheres**

#### **2.1.1. Work-Family Spheres in Portugal**

The scientific body of research which addresses work-family interface is an upward trend amid organisations, society and scientific community (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Edwards & Rothbard, 2000; Grzywacz & Bass, 2003; Grzywacz & Carlson, 2007; Greenhaus & Powell, 2006; Powell & Greenhaus, 2006; Vieira et al., 2014; Voydanoff, 2002) due to some recent worldwide sociological changes. The inclusion of women in the workplace (Edwards & Rothbard, 2000, Vieira et al., 2014) and the simultaneous increasing of dual earner couples (Bennett, Beehr, & Ivanitskaya, 2017) brought bigger challenges for individuals in the family domain (Vieira et al., 2014). Moreover, divorce rate, life expectancy and ageing population (Ford, Heinen, & Langkamer, 2007; Frone, 2003; Greenhaus & Powell, 2006; Grzywacz & Marks, 2000) have also made this topic paramount to comprehend. Concurrently, at the work domain, all workers have been through hurdles after the economic crises (Bennett et al., 2017). Henceforth

conciliating both spheres- family and work - has become a struggling (Bennett et al., 2017), however, mandatory task (Carlson et al., 2006; Grzywacz & Bass, 2003).

To portray Portuguese families state of art, the size of Portuguese families has shrunk from 3.0 in 1994 to 2.5 people in 2017 (FFMS, 2018a). When in 1994 couples with offspring represented 44.6%, in 2017, the percentage was reduced to 35% (FFMS, 2018b). Surprisingly, on the one hand, the number of traditional families has increased by 11% from 2001 to 2011; but, on the other hand, reconstituted families have swollen from 2.69% in 2001 to 6.55% in 2011 (INE, 2011). Plus, traditional families with senior members with 65 years or more, has augmented from 9.4% in 1994 to 12% in 2017 (FFMS, 2018c). When the average of the fertility rate in EU is 1.58, Portuguese citizens have 1.31 children, the lowest fertility rate in Europe (FFMS, 2017) and fairly above the 2.1- the established fertility replacement level (INE, 2014). Besides, on average, Portuguese people do not consider having more than 1.78 children (INE, 2014). Despite this scenario Portuguese wish they were able to have 2.31 children and consider 2.38 as the ideal number of children per family (INE, 2014), meaning Portuguese felt prevented to have more children.

In order to gain a deeper insight regarding the workplace in Portugal, according to Torres, Ramos, & Neves (2016), 2/3 of the professionals do not have the possibility to choose their working hours and only 40% of employed population feels it would be accepted to absent from work without short notice. If the two conditions are combined, merely 13.2% of the workplace population feel like they have the freedom to do so (Torres et al., 2016).

The interaction between the family and working spheres in Portugal is not the smoothest. Portuguese citizens prize at a higher value motherhood when compared to fatherhood (Wall, 2007). At the same time, Portuguese value more men's income when compared to women's income (Wall, 2007). Portugal's workplace fails to adapt to families' needs, specially families with children under 6 years old (Torres, 2004). Likewise, Portuguese families are forced to rely on their own means if they wish to find a better balance between work and family spheres (Fontaine et al., 2007). When asked which measures would allow to increase fertility rates, the second most pointed out measure was easing working conditions for families with children, as long as it does not imply losing workforce-privileges (INE, 2014); another proof of example which reveals Portuguese workers' difficulties in managing work and family. It is also important to acknowledge the Portuguese female employment rate (69.8%) is exceeding EU's female employment rate (66.5%) (Eurostat, 2018) while Portugal has traditional gender-based expectations in the family

context (Matias & Fontaine, 2012). Moreover, in the EU, Portugal happens to have the highest percentage of full-time, dual-earner couples (Eurostat, 2008). Hence, women are still the ones who end up ensuring both parenting and household tasks (Fontaine et al., 2007; Torres, 2004).

### **2.1.2. Work-Family Interface**

The work family interface seems to have been first addressed in 1930 (Frone, 2003). The work-family interface exists whenever an individual's work and family features meet, having direct effects on the work, family, and individual systems (Voydanoff, 2002; Voydanoff, 2005). The failure to find the right balance between family and work often leads to poorer health, inferior feeling of well-being and reduced quality in organisational performance (Grzywacz & Carlson, 2007). Finding the proper manner to balance these two spheres might be one of the predominant challenges of the current era (Halpern, 2005).

Considering the permeability of family-work boundaries (Ford et al., 2007), this interface can be understood through the lenses of six models (Edwards & Rothbard, 2000; Ribeiro & Pimenta, 2014; Vieira et al., 2014); three casual and three are non-casual (Morf, 1989). In light to the present study, only the casual models are to be addressed: the segmentation, compensation and spillover models (Edwards & Rothbard, 2000; Ford et al., 2007; Frone, 2003). The spillover model suggests work and family are related in an interdependent fashion and it is explained by an intra-individual transmission of experiences and emotions from a sphere to another (Vieira et al., 2014). Hence, the overt behaviours, attitudes, emotions, thoughts, skills and values developed in one domain can be used on the other domain once the borders between family and work are considered to be opened (Edwards & Rothbard, 2000; Ford et al., 2007; Frone, 2003). Lately, the spillover model has been considered the one which has more research backup (Vieira et al., 2014), albeit research suggests some individuals, because of individual idiosyncrasies, may benefit from some degree of segmentation (Ribeiro & Pimenta, 2014). Besides, all models may be triggered concurrently (Frone, 2003). The spillover model has led to the conceptualisation of three different constructs: Work-Family Conflict, Work-Family Enrichment and Work-Family Balance (Frone, 2003; Ribeiro & Pimenta, 2014; Vieira et al., 2014).

It is important to stress Work-Family Conflict, Work-Family Enrichment and Work-Family Balance constructs do differ from each other (Carlson, Grzywacz & Zivnuska, 2009; Vieira et al., 2014). To meet both spheres responsibilities (work-family balance) might be shaped by

plenty other factors rather than work-family enrichment; and that might not only be prevented to happen because of work-family conflict. (Carlson et al., 2009). Moreover, against what intuitive thought might make one believe, work-family enrichment is either unrelated or negatively related to work-family conflict (Frone, 2003; Greenhaus & Powell, 2006; Grzywacz and Bass, 2003; Powell & Greenhaus, 2006).

#### **2.1.2.1. Work-Family Positive Synergies**

Despite the fact work-family conflict construct is considered the one which the majority of research papers were based upon (Bianchi & Milkie, 2010; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Dilworth & Kingsbury, 2005; Grzywacz & Marks, 2000; Grzywacz & Bass, 2003; Greenhaus & Powell, 2006; Powell & Greenhaus, 2006), currently, research has witnessed a paradigm shift, in line with positive psychology (Carvalho & Chambel, 2014; Greenhaus & Powell, 2006). Now researchers have been focusing on the positive interdependencies of work-family (Carlson, et al., 2006; Grzywacz & Bass, 2003; Greenhaus & Powell, 2006; Wayne, Grzywacz, Carlson, & Kacmar, 2007), which encompasses four different constructs (Carlson et al., 2006): positive spillover (e.g. Crouter, 1984), family-work facilitation (e.g. Frone, 2003), family-work-enhancement (Sieber, 1974) and family-work-enrichment (Greenhaus & Powell, 2006).

To cover all the differences amid these constructs goes beyond the scope of the present thesis. In fact, work-family enrichment was the adopted construct because it has been pointed out on the literature as the positive work-family interface construct which offers the broadest conceptualization (Carlson et al. 2006; McNall, Nicklin, & Masuda, 2010). Plus, abundantly, when researchers have used other terms, the terms were being used in an inaccurate manner, because the items used were, after all, measuring work-family enrichment (Greenhaus & Powell, 2006). Work-Family Enrichment has been defined as “*the extent to which experiences in one role improves the quality of life in the other role*” (Greenhaus & Powell, 2006, p. 73). The perspective of enrichment is based on the expansionist hypothesis (Ribeiro & Pimenta, 2014; Vieira et al., 2014). Likewise, Work-Family Enrichment focuses on enhanced role performance in one domain as a result of the resources gained on another domain, underlying the potential gains and benefits of performing multiple-roles (Carlson et al., 2006). These potential gains and benefits sharply surpass the multiple role expenses, since they allow people to generate resources which enrich one’s functioning and well-being at different life domains (Carlson, et al., 2006; Grzywacz & Marks,



2000; Vieira et al., 2014). To be considered that enrichment has occurred, resources must not only be transferred to another role but successfully be the reason for improved individual performance (Powell & Greenhaus, 2006) and the improved functioning of the individual must only have an impact at the individual level (Carlson et al., 2006). Moreover, Work-Family Enrichment represents an upgrading of the quality of life associated with one role due to the experiences of performing on another role (Carlson, et al., 2006; Carvalho & Chambel, 2014; Frone, 2003; Vieira et al., 2014; Voydanoff, 2005).

Work-family Enrichment has been found to be bidirectional: work-to-family-enrichment (WFE) and family-to-work-enrichment (FWE)<sup>1</sup>; therefore, these two variables must be considered independently, as matchless effects (Carlson et al., 2006; Frone, 2003, Greenhaus & Powell, 2006; Grzywacz & Bass, 2003; Grzywacz & Marks, 2000; Vieira et al., 2014). Nonetheless, it seems like FWE is substantially stronger than WFE (Greenhaus & Powell, 2006). WFE can be specified into three different variables- development, capital and affection-whereas FWE can be divided in other three dimensions- development, efficacy and affection (Carlson, et al., 2006).

Greenhaus and Powell's (2006) widespread model explains work-family enrichment process. This model stands out from others because it identifies five types of work and family resources which promote Work-Family Enrichment on both directions and defines two paths by which these resources can promote work-family enrichment on both directions (Greenhaus & Powell, 2006). The five different types of resources stressed by the model are 1) skills and perspectives; 2) psychological and physical resources, 3) social-capital resources, 4) flexibility, and 5) material resources. Firstly, skills refer to cognitive and interpersonal, coping and multitasking skills, as well as knowledge acquired by performing a certain role (Bauer, Morrison, & Callister, 1998; Holman & Wall, 2002) and perspectives encompass ways of perceiving and dealing with situations, for example, by respecting individual idiosyncrasies (Ruderman, Ohlott, Panzer, & King, 2002), valuing cultural differences (Cox, 1993), being empathetic (Crouter, 1984). Psychological and physical resources include hope (Seligman, 2002), self-efficacy (Bandura, 1997), self- esteem (Brockner, 1988), resilience (Blaney & Ganellen, 1990), optimism (Seligman, 2002), and physical health (Greenhaus & Powell, 2006). Next, social capital resources embrace

---

<sup>1</sup>Hereafter, WFE will be used to refer to work-to-family enrichment, FWE will be used to refer to family-to-work enrichment and work-family enrichment will be used to address the broad concept which does not differentiate WFE from FWE.

influence and information (Greenhaus & Powell, 2006). Flexibility refers to the sharp prioritising, regarding timing, pace and location, in order to meet the demands of all roles (Greenhaus & Powell, 2006). Lastly, material resources include money, goods and assets obtained from work and family roles (Greenhaus & Powell, 2006). The improvement of the quality of the performance and the experiences in one role due to another (Carlson, et al., 2006; Greenhaus & Powell, 2006; Vieira et al., 2014) may happen directly (instrumental path), where “*skills and perspectives, psychological and physical resources, social-capital resources, flexibility and material resources generated in Role A directly promote high performance in Role B*” (Greenhaus & Powell, 2006, p. 82) or indirectly (affective path “*skills and perspectives, psychological and physical resources, social-capital resources, flexibility, and material resources generated in Role A produce positive affect in Role A*” and this positive affect in role A “*promotes high performance in Role B.*” (Greenhaus & Powell, 2006, p. 82).

Even though only a few studies have been driving attention to the mediator role of work-family enrichment (Crain & Hammer, 2013), FWE partially mediates the relationship between authoritative parenting style and transformational leadership (Dias, 2017); FWE completely mediates a positive sibling relationship and team functioning at the social and task reflexivity level and partially mediates the same variables when the quality of the sibling relationship is negative (Henriques, 2017); and FWE mediates family satisfaction and job resources, such as cohesion, similarity and familiarity amid co-workers (Hunter et al., 2010). In what regards WFE, this variable has been found to mediate the relationship between job characteristics and job outcomes as well as between supervisor support and affective commitment (Baral & Bhargava, 2010); WFE mediates the relation between flexible work arrangements and both job satisfaction and turnover intentions (McNaill et al., 2010); and WFE fully madidates the association of supervisor support and organisational support with job satisfaction (Tang, Siu, & Cheung, 2012).

Finally, in light of the current thesis, it is important to understand the impact of gender work-family interface research. There is a narrow number of studies which have studied social-demographic differences, whether on WFE (Grzywacz & Marks, 2000; Rothbard, 2001) whether on FWE (Kirchmeyer, 1992; Rothbard, 2001). Nevertheless, among all social-demographic variable, gender is the one which has been more significantly studied (Voydanoff, 2002). Nevertheless, the results are rather mixed (Greenhaus & Powell, 2006; Voydanoff, 2002). Even though some studies with large samples have reported statistically significant gender differences,

the absolute size of these differences is typically not large, and they frequently disappeared if age and other family social-demographic characteristics are controlled (Frone, 2003). Hence researchers advocate that this variable should be treated as a control variable (Grzywacz & Bass, 2003).

## **2.2. Sibling Relationship**

It is impossible to deny the impact of family in human development (Alarcão, 2002; Riggio, 2000; Ponti & Smorti, 2018; Spitze & Trent, 2016; Waite, Shanahan, Calkins, Keane, & O'Brien, 2011). Indeed, primarily from sibling and parenting relationship, every single human being learns how to feel, socialize, learn (Fernandes et al., 2007; Ferreira, 2009) and to manage conflicts (Minuchin, 1982). Usually the oldest relationship a person will have during his/her lifecycle is the sibling relationship, which shapes ways of acting, thinking and feeling (Fernandes et al., 2007; Ferreira, 2009). The relational experiences with siblings are believed to have a massive impact for later social relationships. (Fernandes et al., 2007; Ferreira, 2009). The social skills which grow through the relationship between siblings (Alarcão, 2002; Fernandes et al., 2007; Ferreira, 2009) not only are an important familiar resource (Tucker et al., 2013), but also can be used in other microsystems like the workforce (Carlson et al., 2006; Greenhaus & Powell, 2006).

Sibling's relationship quality has a core role in adjustment (Lanthier & Stocker 1992; Padilla-Walker, Harper, & Jensen, 2010). A warm sibling relationship- emotional and instrumental support, warmth and affection- is linked to well-being (Bedford & Avioli, 2001; Ponti & Smorti, 2018), higher perceived level of satisfaction (Ponti & Smorti, 2018), enlarged self-esteem, increased empathy, academic achievement (Volling, 2003) and sense of compromise (Myers & Bryant, 2008). On the other way around, a conflicting sibling relationship is related to internalizing and externalizing behaviours, lower perceived life satisfaction (Milevsky, 2005) and other psychological maladjustment behaviours (Waite, Shanahan, Calkins, Keane, & O'Brien, 2011).

Better understanding of sibling relationship should flourish in empirical research since studies have been focusing in understanding parenting and marital relationships but not sibling relationships (Irish, 1964; Lee, Mancini, & Maxwell, 1990; Connidis, 2001; Fernandes et al., 2007; Jensen, Whiteman, & Fingerman, 2018; Spitze & Trent, 2016; Ponti & Smorti, 2018). Furthermore, regarding the scarce ongoing scientific body of studies on siblings, there is a pronounced literature gap on adult sibling relationships (Fernandes et al., 2007; Ferreira, 2009).

The quality of the sibling relationship - whether positive, whether negative (Cicirelli, 1991)- has also been pointed out as a factor which influences the overall family relationship (Brody, 1998). Likewise, in order to better understand the dynamics from the sibship system, it is mandatory to understand the impact of birth order (Riggio, 2000), personality, gender (Cicirelli, 1991; Eriksen & Jensen, 2006), lifecycle stage, age (Riggio, 2000), size of sibship (Riggio, 2006), differential parental treatment (Hashim & Ahmad, 2016; McHale, Crouter, McGuire & Updegraff, 1995; Portner & Riggs, 2016) and personal well-being (Conger & Little, 2010).

Regarding birth order, some researches (Jensen, Pond, & Padilla-Walker 2015; Lee, Padilla, & McHale, 2015) point out younger siblings overrate the importance of differentiation from their eldest siblings, (Jensen et al., 2018). Only-child are less kind when compared both with older and younger children (Fernandes et al., 2007). Only when comparing only child with older children, there are significant differences when it comes to compliance; whereas when comparing only child with younger children, besides compliance, the results are also statistically different for straightforwardness (Fernandes et al., 2007). Overall, older siblings have higher traits of conscientiousness and altruism and lower traits of hostility when compared to middle children (Fernandes et al., 2007). Furthermore, younger children have higher traits for agreeableness (straightforwardness and compliance) compared to only child, as well higher traits of compliance than middle children (Fernandes et al., 2007).

When it comes to gender, a key variable to comprehend sibship (Walker, Allen, & Connidis 2005), having women in the sibship increases the precepted social support among siblings (Walker, Allen, & Connidis 2005; White & Riedmann, 1992). Indeed, sister dyads exchange more advices (Spitze & Trent., 2006), have a strongest bond (Connidis, 2010), higher levels of intimacy (Stewart. Verbruge, & Beilfuss, 1998), affection (Stewart et al. 1998), contact (Lee et al., 1990; Stewart et al. 1998) and closeness (Spitze & Trent, 2006). If females seem to have higher levels of rivalry and warmth in their relationship with their siblings comparing to males, brothers show a highest level of competition (Stewart et al., 1998). Same-gender sibships have higher rates of exchanged help (Spitze & Trent, 2006). Nevertheless, siblings have a relationship less marked by conflict compared to brothers and sisters (Stocker, Lanthier, & Furman, 1997).

When lifecycle is seen over a holistic viewpoint, sibling relationship remains somewhat stable across time (Spitze & Trent, 2016), and perceived conflict between siblings actually decreases across the family lifecycle (Jensen et al., 2018). However, one should also be mindful

contact tends to decrease in the beginning of adult life, stabilizing during mid-adulthood (White, 2001) or improving (Lanthier & Campbell, 2011). Further, a positive sibling relationship means a powerful source of emotional support across lifecycle stages (Bedford & Avioli, 2001; Brody, 1998; Mota, Serra, Relva & Monteiro, 2017; White, 2001). It is common that, the moment one of the siblings leaves their parents and sibling's house coincides with the period the same sibling will get married (Alarcão, 2002; Conger & Little, 2010; Relvas, 1996), enter the workforce (Larson, Wilson, Brown, Furstenberg & Verma, 2002) and/or become a parent (Alarcão, 2002; Conger & Little, 2010; Relvas, 1996). After all these changes are assimilated, the quality of the siblings' relationship is improved (Conger & Little, 2010) by the new family relationships which are born (Alarcão, 2002; Relvas, 1996). Divorces, widowhood and severe health issues are also associated with increased frequency of contact and emotional closeness (Connidis, 1992; White, 2001).

Going against other studies (e.g. Jensen et al., 2015), closer siblings in terms of age perceived a lower level of conflict throughout time (Jensen et al., 2018).

As the size of the sibship enlarges, parents struggle to even the level of investment on the offspring's education (Cáceres-Delpiano, 2006). However, echoing some studies' results, larger sibships, better is perceived the quality of the relationship (Henriques, 2017; Riggio, 2006).

Parenting relationships have a meaningful impact on the sibling relationship (Fortuna, Roisman, Haydon, Groh, & Holland, 2011) and, overall, are linked sibling relationship when it comes to attachment (Ponti & Smorti, 2018). It has been largely studied how perceived differential treatment by the parents has a negative impact on the quality of sibling's relationships (Brody, 1998; Hashim & Ahmad, 2016; McHale et al., 1995), which can be the cause of high levels of conflict between siblings during adulthood (Portner & Riggs, 2016).

According to the definition of Work-Family Enrichment and its conceptual model (Greenhaus & Powell, 2006), it seems valid to wonder about links between sibling relationship and workplace variables. Nevertheless, to my knowledge, minus one master's thesis (Henriques, 2017), no other study has tried to understand how these variables might be connected.

### **2.3. Team Work**

Teams have become part of the workforce realm (Curral, 2005), to a point it is unimaginable to portrait teamless organisations (Costa, Passos, & Bakker, 2014; West, 2012b). Likewise, at least two individuals (Kozlowski & Ilgen, 2006), who differ in their personal features,

representation of the task (Curral, 2005), age, upbringing and proficiency (West, 2012a) have to adapt to one another, work in a co-dependent fashion (Fay, Shipton, West & Patterson, 2015; Richter, Dawson, & West, 2011), share responsibilities and rewards (Buljac-Samardzic, Wijngaarden, van Wijk, & van Exel, 2011; Richter et al., 2011) and contribute to achieve the organisation's goals (West, 2012a). According to the experts, around 1911, for the first time, Taylor has enlightened the importance of team work at the workforce (Locke, 1982). In fact, by delegating tasks it was possible to increase efficacy and productivity (Locke, 1982; West, 2012b).

Team work happens when a social group who is included in a given organisation performs tasks aiming at the achievement of organisational goals (West & Markiewicz, 2004). In the literature, the following set of ideas defines a team : 1) coordinating resources, such as behaviours, tools, knowledge to pursue common goals; 2) a group of people working as a whole and not individuals working in parallel; 3) to work in a interdependent fashion, with unambiguous roles, in order to achieve those agreed upon goals; 4) positive attachment among the team members and to the projects of the organization; 5) collective sharedness of rewards and costs and to be recognized as a team (Mathieu, Tannenbaum, Donsbach, & Alliger, 2014; Sundstrom, DeMeuse & Futrell, 1990; West 2012b; West & Markiewicz, 2004). To ensure effectiveness, team members must be "*enablers not drainers- people who support effective team, not people who sabotage, undermine or obstruct team functioning.*" (West, 2012a, p. 4).

As each team element identifies with the team as a whole, interpersonal skills are developed (Somech, Desivilya, & Lidogoster, 2009); a pivotal aspect which, in return, influences the performance of the team (Somech et al., 2009). However, the key point in team work regards social interactions (Curral, 2005; Kozlowski & Bell, 2003), which shape decision making and problem-solving processes (West, 2012b), allow a gathering of knowledge and assets (Zaleska, 1998), scanning of miscalculations misstatements (Curral, 2005) and shaping of each other's standpoints (Poole & Hirokawa, 1996). Despite its complexity, human diversity is a factor which can prompt high-quality decision making and innovation among teams (van Knippenburg & Schippers, 2007).

Teams need to foster a reflection-on-action process to be able to deal with uncertainty and complex decision making-processes (West, 1996; West, 2012a). Hence, reflexivity has been defined by West (1996) as "*the extent to which group members overtly reflect upon the groups' objectives, strategies and processes, and adapt them to current or anticipated environmental circumstances*" (West, 1996, p. 559). Likewise, reflexive teams become more flexible and

competent when functioning under dynamic settings, which are to be found at nowadays (Curral, 2005). Henceforth, West (2012a) has created a model which explains effective team functioning, advocating it depends on two different factors: task reflexivity and social reflexivity. Task reflexivity comprehends the assessment of team's goals, which allows the team to appreciate if the goals are adequate and when necessary, to reformulate them and/or the methods to achieve these. (West, 2012a). Parallely, because team's members well-being does matter, social reflexivity comprehends the assessment of team's social functioning, team members well-being, relationships among teammates, how teammates help each other and manage conflicts in a way which facilitates effectiveness (West, 2012a). Research shows social and task reflexivity have a direct impact in task effectiveness, team members' well-being and team viability (West, 2012a)

Echoing workplace system changes, teamwork has been proliferated to other systems, because it is rather difficult to achieve individually whatever a team manages to achieve (Kozlowski & Ilgen, 2006; West, 2012a). When teamwork is proficient, not only production increases but also innovative ideas flow in more easily (Fay et al., 2015). Furthermore, team work may also be the necessary shift to cope with the workplace fast pace changes (West, 2012a), global competition, highly qualified labour, social and environmental concerns (Curral, 2005) and technological breakthrough (Somech et al., 2009). This might be explained by the fact team work generates positive staff attitudes (Richter et al., 2011), broader organisational effectiveness (Somech et al., 2009; West, Borril, Dawson, Scully, Carter, Anelay, Patterson, & Waring, 2002, Richter et al., 2011) productivity (Mathieu, Gilson, & Ruddy, 2006; Curral, 2005), quality (Mathieu et al., 2006; Paul & Anantharaman, 2003; Tata & Prasad, 2004) and performance (Cordery, 2004; Delarue, Hootegeem, Procter, & Burridge, 2008; Arachchige & Robertson, 2016; Rosen, DiazGranados, Dietz, Benishek, Thompson, Pronovost, & Weaver, 2018, Richter et al., 2011).

Despite the interest of this topic amid the academicians (West, 2012b), several aspects in the literature remain unexplored, which prevents a full understanding of team work dynamics (Somech et al., 2009). Throughout time, teammates may even become a family at the workplace (Hunter et al., 2010). Likewise, some researchers, as Hunter et al. (2010) have pointed out the need to relate teamwork domain variables to family domain variables.

## 2.4. Organisational Commitment

Another broadly studied variable on the work sphere is organisational commitment, ever since 1960 (Meyer, Allen, & Smith, 1993; Nascimento et al., 2008). Organisations place at high value their workers' commitment (Hunt & Morgan, 1994). In fact, organisational commitment reduces turnover and absenteeism rates, which in return increases efficacy and productivity (Hunt & Morgan, 1994). Moreover, workers who are commitment to the organisation engage more in extra-job tasks, creative behaviours and innovation (Organ & Ryan, 1995). Furthermore, people who have higher levels of organisational commitment perceive their job more favourably and are more engaged in tasks (Greenhaus & Sklarew, 1981). Adding economic value, when organisations find committed workers they also take competitive advantage (Akintayo, 2010), as it seems this variable is associated with enhanced productivity and devotedness (Cooper-Hakim & Viswesvaran, 2005; Meyer, Stanley, Herscovitch, & Topolnysky, 2002).

The definition of organisational commitment stands as no easy task for academicians to agree upon (Cohen, 2007; Meyer et al., 1993; Nascimento et al., 2008). Nowadays it has been acknowledged how the construct of commitment differs immensely on the setting in which it is being studied (Meyer et al., 1993; Nascimento et al., 2008). Nevertheless, all these definitions tend to find common ground in the notion that organisational commitment demands a psychological attachment, which facilitates, stabilizes and or directs the sense of belonging to the organisation (Meyer & Herscovitch, 2001).

For the last 20 years, the empirical work conducted over organisational commitment has been laying its foundations on Meyer and Allen's (1991) tri-dimensional model (Nascimento et al., 2008). According to the researchers, organisational commitment has three dimensions: affective, instrumental and normative commitment (Meyer & Allen, 1991). Individuals with affective commitment work in the organisation because they wish; individuals with instrumental commitment remain in the organisation because they must; and individuals with normative commitment work in the enterprise because they feel they should (Meyer et al., 1993). On a nutshell, organisational commitment is a psychological state which defines the relationship between the workers and the organisation, with implications on turnover (Meyer & Allen, 1991).

Affective commitment is the dimension of commitment which assumes the worker has an emotional attachment to the organisation, the worker identifies himself/herself with the



organisational values and goals and has a positive organisational citizenship behaviour (Meyer et al, 1993; Chambel & Castanheira, 2012). When affective commitment exists, in the eye of the beholder, it is possible to see an engaged enthusiastic worker, who is drawn to contribute to the success of the organisation (Allen & Meyer, 1996; Meyer & Herscovitch, 2001; Meyer, Becker, & Van den Berghe, 2004), who was embraced organisational goals and values (Monday, Steers, & Porter, 1979), with reduced turnover and absenteeism intentions (Meyer et al., 2002), higher job satisfaction and job performance (Mathieu & Zajac, 1990; Monday, 1998; Riketta, 2008).

In the literature, some examples can be found which relate work-family enrichment and organisational commitment. For instance, Wayne, Randel and Stevens (2006) found out identity with the job has a positive relationship with FWE, the identity with family positively predicts commitment in its three dimensions and predicts negatively turnover intentions. More recently, McNall, Masuda and Nicklin (2010) found out both FWE and WFE relate positively with satisfaction and affective commitment. These results are in accordance with Greenhaus and Powell's model (2006) and with social exchange theory (Blau, 1964). Taken together, these findings stress how work-family enrichment is linked to affective commitment- a link which might be explained by the fact that when workers perceived the headship as supportive of their efforts to manage family and work, they develop an effective bond to the organisation and lower their turnover intentions (Pinto, 2013).

## **2.5. The Current Study**

Social Exchange Theory (SET) by Blau (1964), has been worthy the label of the most influential paradigm to understand workforce behavioural variables (Cropanzano & Mitchell, 2005). Indeed, SET and Greenhaus and Powell's (2006) model have also been brought together on other studies on FWE and work-related outcomes (e.g. MacNall et al. 2010). SET (Blau 1964) supports the idea that social interactions are interdependent and likely to create the exchange of transactions between parties (Blau, 1964). These transactions might be rules, norms and resources; which later lead to a relationship (Blau, 1964) and eventually high-quality relationships (Cropanzano & Mitchell, 2005). Interestingly for the present thesis, organisational commitment and team support (Cropanzano & Mitchell, 2005) are among the variables which have already been studied on light of SET. One example of SET's application is, if workers perceive their organisations as facilitators of their work-family management, there is an increased chance

workers will feel supported by the organisation (Aryee, Srinivas, & Tan, 2005; Rhoades & Eisenberger 2002). Consequently, workers will reciprocate towards the organisation in the form of more favourable and positive attitudes (Aryee et al. 2005; Wayne et al. 2006).

It has been argued the linkages connecting family and work may be predominately social and affective (Hunter et al. 2010; Wayne et al., 2007). Positive Organisational Scholarship (POS) studies positive processes and outcomes amid organizations and their workers (Cameron, Dutton, & Quinn, 2003). Its two main postulations are that systems verge towards the positive and away from the negative (Cameron et al., 2003) and that individuals are prone to nurture and apply their resources in the systems they are involved (Cameron et al., 2003). Therefore, POS suggests if workers recognise organisations as a hub which helps them managing family and work spheres, the organisations will be perceived as more empathetic. As this positivity is generated, workers will reciprocate back with positive attitudes toward the job role and organisation (MacNall et al., 2010), because workers perceive the organisation appreciates their contribution and promotes their well-being (Eisenberger et al., 1986). In light of POS assumptions, team functioning- at the social reflexivity and task reflexivity levels - and organisational commitment were both considered as dependent variable/FWE outcomes, as some authors have already contemplated team variables and organisational commitment in the same model (Bishop, Scott, & Burroughs, 2000; Howes, Cropanzano, Grandey, & Mohler, 2000) due to their social affective nature.

The third theoretical model which sheds light into present thesis is Resource Gain Development Model (Wayne et al., 2007; Hunter et al., 2010) (RGD). Other researchers have suggested RGD should be used to build an empirical body of research on family-work resources (e.g. Hunter et al. 2010). RGD argues individuals have within them the natural tendency to grow and achieve the maximum level of individual and system functioning (Wayne et al., 2007). Thus, when engaged in a role, individuals acquire resources which are the fuel for broader development and growth (Wayne et al., 2007). When gains from one domain are systematically applied in another (Crouter, 1984; Kirchmeyer, 1992), the outcome is improved system functioning (Wayne et al., 2007). Triggers of improved system functioning might be personal characteristics and environmental resources in one system, which, in turn, contribute developmental gains, affective gains, capital gains and enhanced efficiency in another system (Wayne et al., 2007).

Finally, family may be compared to an organization and vice-versa (Zedeck, 1992). Taking a gaze at Ecological Systems Theory (EST) (Bronfenbrenner, 1986), as other studies have done so

(Grzywacz & Marks, 2000; Voydanoff, 2001; Wayne et al., 2007) family and work are two distinct, however, interdependent systems. Moreover, these two systems are composed by several sub-systems; which are in constant interaction with the different systems the individual is inserted at. Moreover, EST postulates individuals have natural tendencies toward higher levels of functioning (Bronfenbrenner, 1979) and personal growth is an outcome of constant interactions between the individual and the environment (Bronfenbrenner & Ceci, 1994). This idea that systems verge towards positivity shares some theoretical foundations with POS assumptions. For one's personal growth to take place is necessary to develop a myriad of resources, which allow interactions between the self and all the subsystems the self belongs to (Bronfenbrenner, 1986).

### **3. Methodological Framework**

A paradigm is a set of beliefs about the social world and how to scientifically comprehend it (Punch, 2014). A paradigm dissects what reality is (ontology), the relationship between the researcher and reality (epistemology) and which methods ought to be used to study a given reality (methodology) (Punch, 2014). The current study falls under the positivism paradigm, which assumes it is possible to understand reality through measurement, since it has an objective nature, therefore measurable (Punch, 2014). Positivism assumes that knowledge stems from human experience and science is deterministic (Clark-Carter, 2009). For this reason, the researcher role is to shed light into the nature of cause-effect relationships, explaining and predicting relationships between variables (Punch, 2014). Plus, since science is mechanistic the researcher should develop hypothesis to be tested by a precise and rigorous methodology (Clark-Carter, 2009).

After coming up with research questions, a protocol to gather data was established, a sample was selected, and all the data were statistical analysed. Given the timeframe constrains a cross-sectional design was the most appropriate to carry out this study.

In this section, goals, research questions and hypothesis, the conceptual map, description of the sample, questionnaires and scales can be found.

#### **3.1. Main and Specific Goals**

**Main goal I:** To study the quality of the sibling relationship.

Specific goals:

- 1) To study the positive quality of the sibling relationship during adulthood.
- 2) To study the negative quality of the sibling relationship during adulthood.
- 3) To study the relationship between a positive sibling relationship and FWE.
- 4) To study the relationship between a negative sibling relationship and FWE.
- 5) To study the positive quality of the sibling relationship as a possible FWE predictor.
- 6) To study the negative quality of the sibling relationship as a possible FWE predictor.

**Main goal II:** To study social-affective work variables

Specific goals:

- 1) To study team functioning at the social reflexivity level.
- 2) To study team functioning at the task reflexivity level.
- 3) To study affective organisational commitment.
- 4) To study the relationship between team functioning at the social reflexivity level and FWE.
- 5) To study the relationship between team functioning at the task reflexivity level and FWE.
- 6) To study the relationship between affective commitment and FWE.
- 7) To study team functioning, at the social reflexivity level as possible FWE outcome.
- 8) To study team functioning, at the task reflexivity level as possible FWE outcome.
- 9) To study affective commitment as possible FWE outcome.

**Main goal III:** To study the relationships between the quality of the sibling relationship and social-affective work variables

Specific goals:

- 1) To study the relationship between a positive sibling relationship and team functioning at the social reflexivity level.
- 2) To study the relationship between a positive sibling relationship and team functioning at the task reflexivity level.
- 3) To study the relationship between a positive sibling relationship and affective commitment.
- 4) To study the relationship between a negative sibling relationship and team functioning at the social reflexivity level.

- 5) To study the relationship between a negative sibling relationship and team functioning at the task reflexivity level.
- 6) To study the relationship between a negative sibling relationship and affective commitment.
- 7) To study the possible total effect between a positive sibling relationship and team functioning at the social reflexivity level.
- 8) To study the possible total effect between a positive sibling relationship and team functioning at the task reflexivity level.
- 9) To study the possible total effect between a positive sibling relationship and affective commitment.
- 10) To study the possible total effect between a negative sibling relationship and team functioning at the social reflexivity level.
- 11) To study the possible total effect between a negative sibling relationship and team functioning at the task reflexivity level.
- 12) To study the possible total effect between a negative sibling relationship and affective commitment.

**Main Goal IV:** To study the positive side of family-work interface.

Specific goals:

- 1) To study FWE.
- 2) To study the possible mediator role of FWE between a positive quality of the sibling relationship and team functioning at the social reflexivity level.
- 3) To study the possible mediator role of FWE between a positive quality of the sibling relationship and team functioning at the task reflexivity level.
- 4) To study the possible mediator role of FWE between a positive quality of the sibling relationship and affective commitment.
- 5) To study the possible mediator role of FWE between a negative quality of the sibling relationship and team functioning at the social reflexivity level.
- 6) To study the possible mediator role of FWE between a negative quality of the sibling relationship and team functioning at the task reflexivity level.

- 7) To study the possible mediator role of FWE between a negative quality of the sibling relationship and affective commitment.

### **3.2. Conceptual Map**

Conceptual maps aid organising and representing variables, as well as their connections, easing the process of understanding the research design (Novak & Cañas, 2008).

Already described theories and models as SET, POS, RGD and EST have guided the selection of variables which involve social-affective resources; conjointly with the aim to answer Frone's (2003) call to empirically dig deeper on how family as a unit of analysis generates resources of great value to the work domain. Steaming for the rationale of combining this idea with EST and RGD, SET, Family-to-Work Enrichment (*FWE*) was conceptualised as a mediator variable, and its factors commuted together, as other studies have opted (e.g. Baral & Bhargava, 2010; Dias, 2017; Henriques, 2017; Hunter et al., 2010; Tang et al., 2012). To bridge gaps on ongoing research, a positive quality of the sibling relationship and a negative quality of the sibling relationship were selected as two independent variables/ FWE predictors; which were tested separately. In light of POS assumptions, team functioning- at the social reflexivity and task reflexivity level- as well as organisational commitment were both considered as dependent variable/FWE outcomes, as some authors have already contemplated team variables and organisational commitment in the same model (Bishop et al., 2000; Howes et al., 2000) due to their social affective nature. Age, gender, tenure and size of sibship have been selected as control variables.

By aiming to lessen all the already-tackled literature gaps, the current thesis has been considered innovative and pioneer in the arrangement of the variables.

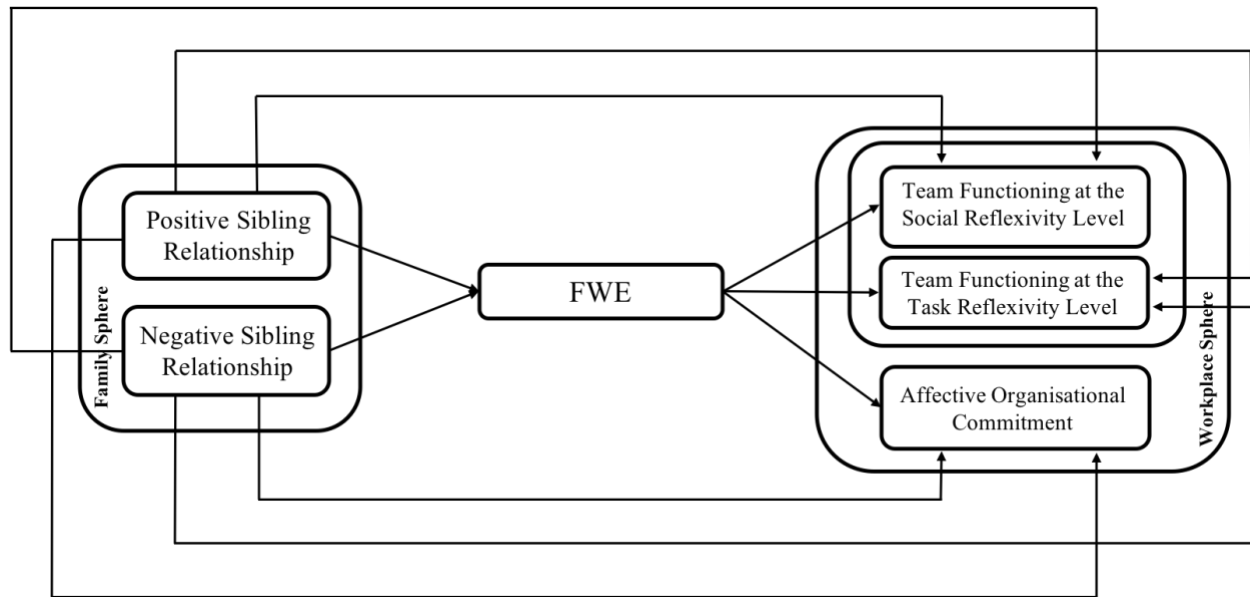


Figure 1. *Conceptual Map*

### 3.3. Research Questions

Due to the current thesis's exploratory nature, the following research questions were considered:

Q1. Does the quality of the sibling relationship relate to FWE?

Q1.1. Does a positive sibling relationship relate to FWE?

Q1.1.2. Does a positive sibling relationship predict FWE?

Q1.2. Does a negative sibling relationship relate to FWE?

Q1.2.2. Does a positive sibling relationship predict FWE?

Q2. Does FWE relate to social-affective work variables?

Q2.1. Does FWE relate to team functioning at the social reflexivity level?

Q2.1.1. Is team functioning at the social reflexivity level an outcome of FWE via positive sibling relationship?

Q2.1.2. Is team functioning at the social reflexivity level an outcome of FWE via negative sibling relationship?

Q2.2. Does FWE relate to team functioning at the task reflexivity level?

Q.2.2.1. Is team functioning at the task reflexivity level an outcome of FWE via positive sibling relationship?

Q.2.2.2. Is team functioning at the task reflexivity level an outcome of FWE via negative sibling relationship?

Q2.3. Does FWE relate to affective commitment?

Q.2.3.1. Is affective commitment an outcome of FWE via positive sibling relationship?

Q.2.3.2. Is affective commitment an outcome of FWE via negative sibling relationship?

Q3. Does the quality of the sibling relationship relate to social-affective work variables?

Q3.1. Does a positive sibling relationship relate to team functioning at the social reflexivity level?

Q3.1.1. Does a positive sibling relationship produce a total effect on team functioning at the social reflexivity level?

Q3.2. Does a positive sibling relationship relate to team functioning at the task reflexivity level?

Q3.2.1. Does a positive sibling relationship produce a total effect on team functioning at the task reflexivity level?

Q3.3. Does a positive sibling relationship relate to affective commitment?

Q3.3.1. Does a positive sibling relationship produce a total effect on affective commitment?

Q3.4. Does a negative sibling relationship relate to team functioning at the social reflexivity level?

Q3.4.1. Does a negative sibling relationship produce a total effect on team functioning at the social reflexivity level?

Q3.5. Does a negative sibling relationship relate to team functioning at the task reflexivity level?

Q3.5.1 Does a negative sibling relationship produce a total effect on team functioning at the task reflexivity level?

Q3.6. Does a negative sibling relationship relate to affective commitment?



Q3.6.1. Does a negative sibling relationship produce a total effect on affective commitment?

Q4. Does FWE mediate the quality of the sibling relationship and social-affective work variables?

Q4.1. Does FWE mediate a positive sibling relationship and team functioning at the social reflexivity level?

Q4.2. Does FWE mediate a positive sibling relationship and team functioning at the task reflexivity level?

Q4.3. Does FWE mediate a positive sibling relationship and affective commitment?

Q4.4. Does FWE mediate a negative sibling relationship and team functioning at the social reflexivity level?

Q4.5. Does FWE mediate a negative sibling relationship and team functioning at the task reflexivity level?

Q4.6. Does FWE mediate a negative sibling relationship and affective commitment?

### **3.4. Procedure**

The socio-demographic questionnaire and scales (Appendix A) were distributed directly to participants at the organisations' headquarters or indirectly, via *Qualtrics* online platform. Later, the data were gathered together on the same data base. The data collection process was initiated on the second semester of 2017 and was finished on the second semester of 2018.

Firstly, participants were present with the informed consent and the main goals of the study. Moreover, both their confidentiality and anonymity were rest assured. Only after giving explicit given consent participants were able to answer the scales and questionnaire.

### **3.5. Measures**

In order to measure the variables of interest, the following scales were applied: Adult Siling Relationship Questionnaire- ASRQ- original version by Lanthier and Stocker (1992); translated Portuguese version by Ferreira (2009); Work Family Enrichment Scale- WFES- original version

by Carlson et al. (2006); translated and adapted Portuguese version by Vieira et al. (2014); Team Functioning- TF- original version by Swift and West (1998); translated Portuguese version by Curral (2005); Affective Commitment Scale- ACS- original version by Meyer & Allen (1997); translated and adapted Portuguese version by Nascimento et al. (2008); and a sociodemographic questionnaire was design and applied (appendix A). The choice to use these measures lays on the fact they have already been used on Portuguese samples, showing good psychometric properties.

### **3.5.1. Socio-Demographic Questionnaire**

Firstly, participants were asked to provide a set of socio-demographic data, in order to describe the sample and control the effect of possible socio-demographic variables.

The questionnaire had a total of 9 questions regarding: gender, age, civil status, tenure, education level, sibship size, siblings' gender sibship order and enterprise size.

### **3.5.2. Family-to-Work Enrichment (FWE)**

To measure FWE, the Portuguese version (Vieira et al., 2014) of Work Family Enrichment Scale - WFES - (Carlson et al., 2006) was used. In total, the original measure has 18 items which access Work Family Enrichment on both directions- 9 items measuring WFE (e.g. *My involvement in my work puts me in a good mood and this helps me be a better family member*) and 9 items measuring FWE (e.g. *My involvement in my family Pushes me to minimize distractions while working and this helps me be a better worker*). Given the current study goals, only the items measuring FWE have been applied, as other researchers have chosen to do on the Portuguese context (Carvalho & Chambel, 2014). Hence, the FWE scale includes 3 factors: FWE development (items 1-3), FWE affect (items 4-6) and FWE efficacy (items 7-9). FWE was measured with a 5-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (5).

In line with Vieira et al. (2014), WFES has a good internal consistency (e.g.  $\alpha > .70$ ; Nunnally, 1978), with a reported Cronbach alpha coefficient of .90 for FWE development; a reported Cronbach alpha coefficient of .94 for FWE affect; and a reported Cronbach alpha coefficient of .84 for FWE efficacy. In the present study, Cronbach alpha coefficient was .93 for FWE development; .94 for FWE affect; .87 for FWE efficacy.

### 3.5.3. Quality of Sibling Relationship

Adult Sibling Relationship Questionnaire- ASRQ- (original version by Lanthier and Stocker (1992); translated Portuguese version by Ferreira (2009)) was used to measure the quality of the sibling relationship. In total, this measure has 81 items which access the perceived quality of the sibling relationship considering two different lenses- the perception of the participant as well as the perception the participant has regarding how their siblings perceive the relationship. The original scale measures 3 factors: warmth (e.g. *To what extent do you accept your sibling lifestyle?*) conflict (e.g. *To what extent do you annoy your sibling?*) and rivalry (e.g. *Do you consider your mother supports you or your sibling more?*).

Given the current study goals, only the items regarding the perception of the participant were applied and rivalry items were eliminated. Thereby, the final applied measure had 37 items.

Because the Portuguese version of ASRQ is missing a validation study for the Portuguese context (to my knowledge only two master's thesis (Ferreira, 2009; Henriques, 2017) used this measure and both applied the translated-scale-version) an exploratory factorial analysis was conducted (Appendix C) regarding the 37 items' correlation matrix, using principal component extraction estimator followed by an Oblimin rotation of two-factor solution with Kaiser normalisation method. After the suitability of data for factor analysis was assessed, two components were extracted, using Kaiser criterion (eigenvalue above 1), which, together, explain 45.32% of the variance. The first component explains 32.79% of the variance, whereas the second component explains 12.52% of the variance. After conducting the exploratory factor analysis, in line with Lanthier and Stocker (1992) and Ferreira (2009), it was possible to confirm that indeed one of the extracted factors - the first component- includes items regarding instrumental support, emotional support, affection, intimacy, admiration, awareness of the other and acceptance; while the other factor - the second component - includes items regarding opposition, competition, antagonism, quarrelling and exerted power over the other. There was a weak negative correlation between the two factors ( $r = -.02$ ). The results of this exploratory factorial analysis, in line with previous research on ASRQ Portuguese version (Ferreira, 2009; Henriques, 2017), support the idea the first factor measures a warmth/positive sibling relationship and the second factor measures negative/conflicting sibling relationship. Items for each factor were selected whose loading on the component had a value above .3. Items 8, 9, 21 and 32 had parameter loads below .3 (.27, .27, .3

and .17); hence these items were excluded. Likewise factor 1 (warm/positive sibling relationship) was calculated using 23 items- 1, 2, 4, 6, 7, 11, 12, 13, 14, 16, 18, 19, 23, 24, 25, 26, 28, 30, 31, 33, 35, 36, 37- and factor 2 (negative/conflicting sibling relationship) was calculated using 10 items- 3, 5, 10, 15, 17, 20, 22, 27, 29, 34- at the end, a total of 33 items. These factors were measured with a 5-point Likert scale, ranging from *hardly at all* (1) to *extremely much* (5).

According to Ferreira (2009), ASRQ has quite high internal consistency (e.g.  $\alpha > 0.70$ ; Nunnally, 1978), with a reported Cronbach alpha coefficient of .93 for factor 1 and a reported Cronbach alpha coefficient of .82 for factor 2. In the current study, Cronbach alpha coefficient was .95 for factor 1- a warm/positive sibling relationship and Cronbach alpha coefficient was .82 for factor 2- a negative/conflicting sibling relationship.

### **3.5.4. Team Functioning**

To measure this variable, the Portuguese translation (Curral, 2005) of Team Functioning Scale - TF - (Swift & West, 1998) was used. Regarding the original scale, details about its reliability and validity can also be found in Carter and West (1998). In total, this measure has 16 items- 9 items which measure team functioning at the social reflexivity level (e.g. *In this team, people teach one another new skills*) and 9 items which measure team functioning at the task reflexivity level (e.g. *Methods used by the team to get the job done are often discussed*). Given the current study goals, all items were applied.

In spite of having been used in other studies in the Portuguese context (Curral, 2005; Henriques, 2017), the Portuguese version of TF is missing a validation study. Therefore, an exploratory factorial analysis was conducted (Appendix D) regarding the 18 items' correlation matrix, principal component extraction followed by an Oblimin rotation of two-factor solution with Kaiser normalisation method. After the suitability of data for factor analysis was assessed, two components were extracted, using Kaiser criterion (eigenvalue above 1), which, together, explain 52.23% of the variance. The first component explains 46.70% of the variance, whereas the second component explains 10.53% of the variance. After conducting the exploratory factor analysis, in line with Swift and West (1998) as well as Curral (2005), it was possible to confirm that indeed one of the extracted factors - the first component- includes items regarding team functioning at the social reflexivity level; while the other factor- the second component - includes items regarding team functioning at the task reflexivity level. There was a moderate positive correlation

between the two factors ( $r = .49$ ). Items for each factor were selected whose loading on the component had a value above .3. Following a similar fashion as in Curral (2005), items 5 and 8 had parameter loads below .3 (.25 and .17); therefore, these items were excluded (Pallant, 2011). Likewise factor 1 (social reflexivity level) was calculated using 8 items- 9, 10, 11, 12, 13, 14, 15, 16 - and factor 2 (task reflexivity level) was calculated using 6 items- 1, 2, 3, 4, 6, 7- a final of 14 items. These factors were measured with a 5-point Likert scale, ranging from *highly appropriate* (1) to *highly inappropriate* (5).

Similar to Curral (2005) TF shows a quite high internal consistency (e.g.  $\alpha > .70$ ; Nunnally, 1978), with a reported Cronbach alpha coefficient of .90 for social reflexivity and a reported Cronbach alpha coefficient of .89 for task reflexivity.

### 3.5.5. Affective Commitment

To measure this variable, the Portuguese version (Nascimento et al., 2008) of Affective Commitment Scale- ACS (Meyer & Allen, 1997) was used. In total, the original measure has 6 items which measure ACS (e.g. *I would be very happy to spend the rest of my career with this organisation*). The ACS includes a single factor- organisational affective commitment, measured with a 7-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (7).

Nascimento et al. (2008) have reported ACS has a good internal consistency (e.g.  $\alpha > .70$ ; Nunnally, 1978), with a reported Cronbach alpha coefficient of .91. In the present study, affective commitment consistency has slightly reduced to a Cronbach alpha coefficient of .83; yet still showing a good level of internal consistency.

## 3.6. Sample

In total, 450 people participated in the study (Appendix B). Nevertheless, from all these participants, 148 were only child, henceforth, the final sample size considered had 302 participants.

**Age:** The mean age was 44.56 ( $SD=10.96$ ), with a range from 22 to 75 years old.

**Gender:** The majority of the participants were men; 39.6% were women ( $n=178$ ) and 60.4% were men ( $n=272$ ).

**Civil status:** The sample mostly included individuals who were married. Hence, 18% of the participants were single ( $n=81$ ); 58.9% were married ( $n=265$ ); 12.4% were in registered

partnership (n=56); 1.3% were separated (n=6); 7.8% were divorced (n=35); 0.7% were re-married (n=3); 0.9% were widows (n=4).

**Education level:** All the 450 participants have attained at least the lowest level of education, albeit the mostly common in the present sample, participants held a bachelor's degree and 70% of the participants sample had attended university. Likewise, 0.7% had concluded the 4<sup>th</sup> grade of elementary school (n=3); 3.3% had concluded the 6<sup>th</sup> grade of elementary school (n=15); 1.8% had concluded the 9<sup>th</sup> grade of elementary school (n=8); 18.9% had finished high school (n=85); 5.6% had finished a degree on the technical-professional system (n=25); 3.8% held a pre-Bologna bachelor's degree (n=17); 37.8% held a post-Bologna bachelor's degree (n=170); 24.2% held a master's degree (n=109); 0.2% held a doctoral qualifications (n=1); 3.8% considered they held a different category (for example MBA or post graduations) (n=17).

**Enterprise size:** The research sample was drawn from 10 different companies: two large companies (n<sub>company1</sub>=164; n<sub>company2</sub>=213), five medium companies (n<sub>company3</sub>=18; n<sub>company4</sub>=14; n<sub>company5</sub>=13; n<sub>company6</sub>=10; n<sub>company7</sub>=5) and three small companies (n<sub>company8</sub>=2; n<sub>company9</sub>=2; n<sub>company10</sub>=9). This means 83.8% of the participants were working at a large enterprise, 13.3% at a medium enterprise and 2.9% at a small enterprise.

**Tenure:** On average, the participants have been working for their current company or 16.23 years (*SD*=11.26). In fact, 17.8% of participants have been working for their company for less than 5 years (n=80); 17.6% have been working between five and nine years (n=79); 14.2% between ten and fourteen years (n=64); 15.3% between fifteen and nineteen years (n=69); 10.0% between twenty and twenty-four years (n=45); 8.9% between twenty-five and twenty-nine years (n=40) and 16.2% for thirty years or more (n=73). The minimum of years participants have been working for their present company was less than a year (n=6) and the maximum was forty-five years (n=1).

**Sibship size:** All participants provided information when it comes to the size of their sibship. The mean average for sibship size was 2 (*SD*=1.6). The largest sibship size had twelve siblings. Thus, 54.6% of participants' sibship was two siblings (n=165); 23.5% of participants' sibship was three siblings (n=71); 8.6% of participants' sibship was four siblings (n=26); 5% of participants' sibship was five siblings (n=15); 2.6% of participants' sibship was six siblings (n=8); 3% of participants' sibship was seven siblings (n=9); 1.7% of participants' sibship size was eight siblings (n=5); 0.7% of participants' sibship was ten siblings (n=2); 0.3% of participants' sibship was twelve siblings (n=1).

**Sibship order:** The research sample was mostly constituted by older siblings. Hence 40.7% of the sample participants were the older sibling (n=123); 15.2% of the participants were the middle sibling (n=46); 37.4% of the participants were the younger sibling (n=113); 1% of the participants had a twin (n=3); and 6.3% of the participants reported being “other sibling” (n=19).

### **3.7. Control Variables**

Gender, age, sibship size and tenure were included as control variables, accordingly to ongoing studies in the literature. As a matter of fact, researchers have been controlling the effect of gender and age in studies measuring FWE (e.g. Aryee et al., 2005; Grzywacz & Butler, 2005; Grzywacz & Marks, 2000; Wayne et al., 2007), quality of the sibling relationship (e.g. Conger & Little, 2010; Fortuna et al., 2011), affective commitment (Chambel & Castanheira, 2012; Meyer & Allen, 1997; Nascimento et al., 2008) and team functioning; sibship size effect has been controlled in studies focusing on the sibling relationship (e.g. Conger & Little, 2010; Milevsky, Smoot, Leh & Ruppe, 2005; Steelman, Powell, Werum & Carter, 2002); and tenure has been as well controlled when organisational affective commitment is measured (e.g. Chambel & Castanheira, 2012; Meyer & Allen, 1997; Nascimento et al., 2008).

Gender has been code as a dummy variable (1= man; 2=woman); age has been code in years; sibship size has been code in number of siblings and tenure has been code in a seven sets of time range, each of the sets with 5 years (1= works in the company for less than 5 years; 2= works in the company 5-9 years; 3= works in the company 10-14 years; 4= works in the company 15-19 years; 5= works in the company 20-24 years; 6=works in the company 25-29 years; 7= works in the company for 30 years or more).

### **3.8. Statistical Analysis**

All gathered data were analysed with Statistical Package for Social Sciences (SPSS 24.0).

According to the present thesis's goals, input information regarding gender, age, tenure and sibship size were included as control variables. The remaining socio-demographical data was used to gain better insight of the sample's features.

In order to answer the research questions, the correlations between variables were accessed with Pearson correlation coefficient. Before running analysis concerning mediation, it is

paramount to first check correlations (Fairchild & Mackinnon, 2010). Thus, after testing correlations amongst variables, using PROCESS macro, version 3.0. for SPSS, developed by Hayes (2013), unstandardized coefficients were estimated. Regarding the mediation research questions model 4 for simple mediation was used and indirect effects' significance level were taken into account.

Cohen's (1988) criterion were taken into consideration to discriminate the absolute value of Pearson correlation coefficient ( $r$ ): if  $.10 > r > .29$  the absolute value of Pearson correlation was considered small; if  $.30 > r > .49$  the absolute value of Pearson correlation was considered medium; if  $.50 > r > 1.0$  the absolute value of Pearson correlation was considered large.

Regarding the possible mediator role of FWE between the quality of sibling relationship and social-affective work domain variables, PROCESS calculates unstandardized effects between variables with a bootstrapping procedure (Hayes, 2013). Effects are significant when the upper and lower bound of 95% confidence intervals (CI) do not contain zero. Bootstrapping is a nonparametric resampling test, using confidence intervals (Hayes, 2013). PROCESS bootstrapping is appropriate to test mediation because it has greater statistical power than other approaches (e.g. Baron and Kenny (1986) 4 step methodology), while also minimizing the Type I error rate (Hayes, 2013). Mediation is assessed by the indirect effect of the X (independent variable) on Y (dependent variable) through M (mediator), which differs from the total effect (the effect of X on Y while M is not being controlled) and the direct effect (the effect on of X on Y when M is controlled) (Hayes, 2013; Zhao, Lynch, & Chen, 2010). In order to allow for separation of the specific influences of the two predictors six separate mediation analyses were performed. On the six analysis, FWE was always included as a mediator and age, gender tenure and sibship size as covariates. On the first analysis, positive sibling relationship was included as a predictor and social reflexivity as an outcome. On the second analysis, positive sibling relationship was included as a predictor and task reflexivity as an outcome. On the third analysis, positive sibling relationship was included as a predictor and affective commitment as an outcome. On the fourth analysis, negative sibling relationship was included as a predictor and social reflexivity as an outcome. On the fifth analysis, negative sibling relationship was included as a predictor and task reflexivity as an outcome. On the sixth analysis, negative sibling relationship was included a predictor and affective commitment as an outcome. Bootstrapping with 1000 samples was used in all the analysis described to estimate the indirect effect. Typically, recognising the outdated 4 steps



methodology of Baron and Kenny (1986), it is adequate to report only the indirect effect when testing for mediation. However, the proposed conceptual model entails such exploratory relationships, it has been decided to report an interpret all the relationships between the variables of each mediation model (effect of X on M; effect of M on Y trough X; total effect, direct effect an indirect effect) anticipating possible empirical implications.

## 4. Results

### 4.1. Descriptive Statistics

The results of the current thesis will be presented in the present chapter. All latent variables were operationalized and the means for each answer were calculated, in such a way the Likert-scale range of values were preserved. Latent variables descriptive measures are presented on table 1. All latent variables were measured on a 5-item Likert scale, except for *Affective Commitment*, which was measured with a 7-item Likert scale.

Table 1. Latent variables descriptive measures: Positive Sibling Relationship, Negative Sibling Relationship, FWE, Social Reflexivity Level, Task Reflexivity Level and Affective Commitment

	n	Minimum	Maximum	Mean	Standard Deviation
Positive Sibling Relationship	302	1.00	4.96	3.60	.78
Negative Sibling Relationship	302	1.00	3.80	1.76	.59
FWE	301	1.00	5.00	3.96	.69
Social Reflexivity Level	302	1.13	5.00	3.85	.73
Task Reflexivity Level	302	1.00	5.00	3.56	.77
Affective Commitment	302	2.50	7.00	5.85	.92

As table 1 shows, there is one missing answer regarding the FWE scale, due to one participant who hasn't answered all items. Furthermore, *Positive Sibling Relationship*, *FWE Total*, *Social Reflexivity Level*, *Task Reflexivity Level* and *Affective Commitment* mean values fall under the upper limit considering the Liker-scale range of each measure.

From table 1, it is possible to draw that participants report a higher level of warmth in their relationship with their siblings ( $M=3.6$ ;  $SD=0.8$ ) rather than conflict ( $M=1.76$ ;  $SD=0.59$ ). Moreover, they do identify the existence of enrichment from the family sphere to the workplace

( $M=3.96$ ;  $SD=0.69$ ), report good team functioning both at the social ( $M=3.85$ ;  $SD=0.73$ ) and task reflexivity level ( $M=3.56$ ;  $SD=0.77$ ). Additionally, participants report a fairly good sense of affective commitment to their enterprise ( $M=5.85$ ;  $SD=0.92$ ).

## 4.2. Does the quality of the sibling relationship relate to FWE?

The first main goal of the present thesis was to study the quality of the sibling relationship. Hence, Pearson correlations values ( $r$ ) were calculated among the quality of the sibling relationship and controls (Appendix E). A *Positive Sibling Relationship* is positively correlated with sibship size ( $r=.20$ ,  $p < .01$ ); while a *Negative Sibling Relationship* is negatively correlated to gender ( $r=.13$ ,  $p < .05$ ).

To understand the relationships between sibling variables and the other latent variables, two questions and two sub-questions were raised.

In order to answer the first question- *Does a Positive Sibling Relationship relate to FWE?* – given the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). According to the information displayed on Pearson Correlations table there is a positive medium significant relationship ( $r=.21$ ;  $p < .01$ ) between a *Positive Sibling Relationship* and *FWE*. To answer the sub-question- *Does a positive sibling relationship predict FWE?* - unstandardized coefficients ( $B$ ) were estimated (Appendix F, G and H; output 1). In line with the data presented on the predictors table, there is a significant effect of a *Positive Sibling Relationship* on *FWE* ( $p < .001$ ) with a positive unstandardized positive small coefficient ( $B=.19$ ;  $SE=.05$ ). Approximately 6% of the variance in *FWE* was accounted by a *Positive Sibling Relationship* ( $R^2=.06$ ).

In order to answer the second question- *Does a Negative Sibling Relationship relate to FWE?* - given the psychometrics properties of latent variables, Pearson correlations values were calculated (Appendix E). According to the information displayed on Pearson Correlations table there is a weak non-significant relationship between a *Negative Sibling Relationship* and *FWE*. Concerning the sub-question- *Does a negative sibling relationship predict FWE?* - weighting mediation assumptions, since there is no correlational relationship between a *Negative Sibling Relationship* and *FWE*, it is already known a *Negative Sibling Relationship* will not predict *FWE*. The unstandardized coefficients ( $B$ ) which were estimated between a *Negative Sibling Relationship* and *FWE* can be found on Appendix I, J and K (output 1).

The above-mentioned results, taken together, indicate individuals with more siblings are more prone to report a positive sibling relationship and that men tend to report higher levels of conflict among siblings when compared to women. Furthermore, the greater the *Positive Sibling Relationship* value is, the greater *FWE* will be; and that reporting a *Negative Sibling Relationship* has no impairments in *FWE*. Moreover, a *Positive Sibling Relationship* predicts *FWE*; yet a *Negative Sibling Relationship* does not predict *FWE*. Due to the fact a *Negative Sibling Relationship* does not predict *FWE*, the likelihood *FWE* will mediate a *Negative Sibling Relationship* shrinks considerably (Fairchild & Mackinnon, 2010; Mascha, Dalton, Kurz, & Saager, 2013). Nonetheless, the models including negative sibling as a predictor are still possible to be mediated by *FWE* (Zhao et al., 2010), which endorses the decision of reporting and interpreting all estimated effects. Obtained results point out younger workers perceived a higher *FWE* value.

### 4.3. Does FWE relate to social-affective work variables?

The second main goal of the present thesis was to study social-affective work variables. Hence, firstly, Pearson correlations values ( $r$ ) were calculated (Appendix E) between social affective variables and controls. Whereas *Social Reflexivity* is negatively correlated to gender ( $r = -.16, p < .01$ ) and tenure ( $r = -.16, p < .01$ ), *Task Reflexivity* is positively correlated to age ( $r = .15, p < .01$ ), sibship size ( $r = .13, p < .05$ ) and tenure ( $r = -.18, p < .01$ ). Additionally, *Affective Commitment* is positively correlated to sibship size ( $r = .13, p < .05$ ) and moderately correlated to tenure ( $r = .34, p < .01$ ). Secondly, Pearson correlations values ( $r$ ) were calculated (Appendix E) amongst social-affective variables. Naturally *Social* and *Task Reflexivity* are largely correlated ( $r = .61, p < .01$ ). *Social Reflexivity* and *Affective Commitment* are moderately correlated ( $r = .46, p < .01$ ) and *Task Reflexivity* and *Affective Commitment* are also moderately correlated ( $r = .40, p < .01$ ). Pearson correlations values ( $r$ ) were calculated (Appendix E) between *FWE* and controls. Results have demonstrated *FWE* is negatively correlated to age ( $r = -.12, p < .05$ ).

To understand the relationships between *FWE* and the social-affective work variable, six questions and six sub-questions were formulated.

To answer the first question- *Does FWE relate to Team Functioning at the Social Reflexivity Level?* - owing to the psychometrics properties of latent variables, Pearson

correlations values ( $r$ ) were calculated (Appendix E). As it is presented on the Pearson Correlations table (Appendix E) there is a positive medium significant relationship between *FWE* and *Team Functioning* at the *Social Reflexivity Level* ( $r=.27$ ;  $p<.01$ ). Moving to the first set of sub-questions- *Is Team Functioning at the Social Reflexivity Level an outcome of FWE via Positive Sibling Relationship?* - unstandardized coefficients ( $B$ ) were estimated, separately, for *Positive Sibling Relationship*. Taking a gaze at the information displayed on the outcome table (Appendix F, Output 2), it is possible to conclude there is a significant effect of *FWE* on *Team Functioning at The Social Reflexivity Level* ( $p<.001$ ) with an unstandardized positive moderate coefficient ( $B=.28$ ;  $SE=.06$ ). Approximately 14% of the variance in *Team Functioning at The Social Reflexivity Level* was accounted by *FWE* via *Positive Sibling Relationship* ( $R^2=.14$ ). Plus, gender produced a negative small significant effect on this relationship ( $B=-.20$ ;  $SE=.08$ ;  $p<.05$ ). Even though the likelihood *FWE* will mediate a *Negative Sibling Relationship* had shrunk considerably, to answer to the sub-question- *Is Team Functioning at the Social Reflexivity Level an outcome of FWE via Positive Sibling Relationship?*- unstandardized coefficients ( $B$ ) were estimated (Appendix I, Output 2). There is a significant effect of *FWE* on *Team Functioning at The Social Reflexivity Level* ( $p<.001$ ) and an unstandardized positive moderate coefficient ( $B=.29$ ;  $SE=.06$ ) via *Negative Sibling Relationship*. Approximately 14% of the variance in *FWE* was accounted by *Team Functioning at The Task Reflexivity Level* via *Negative Sibling Relationship* ( $R^2=.14$ ).

To answer the second question- *Does FWE relate to Team Functioning at the Task Reflexivity Level?* - owing to the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is presented on the Pearson Correlations table (Appendix E) there is a positive medium significant relationship between *FWE* and *Team Functioning* at the *Task Reflexivity Level* ( $r=.31$ ;  $p<.01$ ). Moving to the second set of sub-questions- *Is team functioning at the Task Reflexivity Level an outcome of FWE via Positive Sibling Relationship?* - unstandardized coefficients ( $B$ ) were estimated. Taking a gaze at the information displayed on the outcome table (Appendix G, Output 2), it is possible to conclude there is a significant effect of *FWE* on *Team Functioning at The Task Reflexivity Level* ( $p<.001$ ) and an unstandardized moderate positive coefficient ( $B=.35$ ;  $SE=.06$ ) via *Positive Sibling Relationship*. Approximately 15% of the variance in *Team Functioning at The Task Reflexivity Level* was accounted by *FWE* via *Positive Sibling Relationship* ( $R^2=.15$ ). Even though the likelihood *FWE* will mediate a *Negative Sibling Relationship* had decreased considerably, to answer to the sub-

question- *Is Team Functioning at the Task Reflexivity Level an outcome of FWE via Positive Sibling Relationship?*- unstandardized coefficients (B) were estimated (Appendix J, Output 2). There is a significant effect of *FWE* on *Team Functioning at The Task Reflexivity Level* ( $p < .001$ ) and an unstandardized positive moderate coefficient ( $B = .36$ ;  $SE = .06$ ) via *Negative Sibling Relationship*. Approximately 16% of the variance in *Team Functioning at The Task Reflexivity Level* was accounted by *FWE* via *Negative Sibling Relationship* ( $R^2 = .16$ ).

To answer the third question- *Does FWE relate to Affective Commitment?* - owing to the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is presented on the Pearson Correlations table (Appendix E) there is a moderate significant positive relationship between *FWE* and affective commitment ( $r = .34$ ;  $p < .01$ ). Moving to the third set of sub-questions- *Is Affective Commitment an outcome of FWE via Positive Sibling Relationship?* - unstandardized coefficients (B) were estimated. Taking a gaze at the information displayed on the outcome table (Appendix H, Output 2) it is possible to conclude there is a significant effect of *FWE* on *Affective Commitment* ( $p < .001$ ) and an unstandardized moderate positive coefficient ( $B = .49$ ;  $SE = .69$ ) via *Positive Sibling Relationship*. Approximately 28% of the variance in *Affective Commitment* was accounted by *FWE* via *Positive Sibling Relationship* ( $R^2 = .28$ ). Plus, tenure produced a positive significant effect on this relationship ( $B = .11$ ;  $SE = .04$ ;  $p < .01$ ). Even though the likelihood *FWE* will mediate a *Negative Sibling Relationship* had fallen considerably, to answer to the sub-question- *Is Team Functioning at the Task Reflexivity Level an outcome of FWE via Positive Sibling Relationship?*- unstandardized coefficients (B) were estimated (Appendix K, Output 2). There is a significant effect of *FWE* on *Affective Commitment* ( $p < .001$ ) and an unstandardized moderate positive coefficient ( $B = .52$ ;  $SE = .07$ ) via *Negative Sibling Relationship*. Approximately 27% of the variance in *Affective Commitment* was accounted by *FWE* via *Negative Sibling Relationship* ( $R^2 = .27$ ).

All the aforesaid results allow broader insight regarding social-affective variables. In what regards social reflexivity, men are more prone to report social reflexivity and that the longer one works for the enterprise, higher social reflexivity will be. Concerning task reflexivity, older people and workers who have more siblings are the ones who tend to report upper task reflexivity; while higher tenure is linked with lower levels of reported task reflexivity. Regarding affective commitment, the longer workers have been employed by the company higher will be affective

commitment. Obtained results indicate individuals who better manage to transfer family resources to their workplace are the ones who better contribute to team functioning, both at the social and task reflexivity level; as well are the ones who will have a greater level of affective commitment to their organisation. The three dependent variables- *Affective Commitment*, *Social* and *Task Reflexivity* are moderately correlated, backing up the decision to study together affective commitment, social reflexivity and task reflexivity as possible FWE outcomes. Indeed, *Affective Commitment*, *Social* and *Task Reflexivity*- are all outcomes of *FWE*, via both *Positive* and *Negative Sibling Relationship*; both with reasonable values. For both predictors, women have lower scores of *Social Reflexivity* as a *FWE* outcome. Again, for both predictors, workers who have been longer working at the enterprise have higher scores on *Affective Commitment* as a *FWE* outcome.

#### **4.4. Does the quality of the sibling relationship relate to social-affective work variables?**

The third main goal of the present thesis was to study the relationships between the quality of the sibling relationship and social-affective work variables. Six questions and six questions have been formulated.

By means of answering the first question- *Does a Positive Sibling Relationship relate to Team Functioning at the Social Reflexivity Level?* – considering the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is shown on the Pearson Correlations table (Appendix E) there is a positive small significant relationship between a *Positive Sibling Relationship* and *Team Functioning at the Social Reflexivity Level* ( $r=.17$ ;  $p<.01$ ). In order to answer the first sub question- *Does a Positive Sibling Relationship produce a total effect on Team Functioning at The Social Reflexivity Level?*- unstandardized coefficients ( $B$ ) were estimated for the total effect of the predictor *Positive Sibling Relationship* on the outcome *Team Functioning at The Social Reflexivity Level*. Bearing in mind Appendix F (Output 3), it is possible to conclude there is a significant total effect of *Positive Sibling Relationship* on *Team Functioning at the Social Reflexivity Level* ( $p<.01$ ) and a positive, yet small, unstandardized positive coefficient ( $B=.18$ ;  $SE=.07$ ). Approximately 7% of the variance in *Team Functioning at the Social Reflexivity Level* was accounted by *Positive Sibling Relationship*

( $R^2=.07$ ). Additionally, gender produces a negative significant effect on this relationship ( $B=-.22$ ;  $SE=.08$ ;  $p<.05$ ).

By means of answering the second question- *Does a Positive Sibling Relationship relate to Team Functioning at the Task Reflexivity Level?* – considering the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is shown on the Pearson Correlations table (Appendix E) there is there is a positive small significant relationship between a *Positive Sibling Relationship* and *Team Functioning at the Task Reflexivity Level* ( $r=.14$ ,  $p<.05$ ). In order to answer the second sub question- *Does a Positive Sibling Relationship produce a total effect on Team Functioning at The Task Reflexivity Level?*-, unstandardized coefficients ( $B$ ) were estimated for the total effect of the predictor (*Positive Sibling Relationship*) on the outcome (*Team Functioning at The Task Reflexivity Level*). Bearing in mind Appendix G (Output 3), it is possible to conclude there is a significant total effect of *Positive Sibling Relationship* on *Team Functioning at the Task Reflexivity Level* ( $p<.01$ ) and an unstandardized positive small coefficient ( $B=.13$ ;  $SE=.06$ ). Approximately 7% of the variance in *Team Functioning at the Task Reflexivity Level* was accounted by *Positive Sibling Relationship* ( $R^2=.07$ ).

By means of answering the third question- *Does a Positive Sibling Relationship relate to Affective Commitment?* – considering the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is shown on the Pearson Correlations table (Appendix E) there is there is a positive small significant relationship between a *Positive Sibling Relationship* and *Affective Commitment* ( $r=.18$ ;  $p<.01$ ). In order to answer the third sub question- *Does a Positive Sibling Relationship produce a total effect on Affective Commitment?*-, unstandardized coefficients ( $B$ ) were estimated for the total effect of the predictor *Positive Sibling Relationship* on the outcome *Affective Commitment*. Bearing in mind Appendix H (Output 3), it is possible to conclude there is a significant total effect of *Positive Sibling Relationship* on *Affective Commitment* ( $p<.01$ ) and an unstandardized positive small coefficient ( $B=.19$ ;  $SE=.07$ ). Approximately 15% of the variance in *Affective Commitment* was accounted by *Positive Sibling Relationship* ( $R^2=.15$ ). Additionally, tenure produces a positive small significant effect on this relationship ( $B=.12$ ;  $SE=.04$ ;  $p<.05$ ).

By means of answering the fourth question- *Does a Negative Sibling Relationship relate to Team Functioning at the Social Reflexivity Level?* – considering the psychometrics properties

of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is shown on the Pearson Correlations table (Appendix E) there is a small significant negative relationship between a *Negative Sibling Relationship* and *Team Functioning at the Social Reflexivity Level* ( $r=-.16$ ;  $p<.01$ ). In order to answer the fourth sub question- *Does a Negative Sibling Relationship produce a total effect on Team Functioning at the Social Reflexivity Level?*- unstandardized coefficients (B) were estimated for the total effect of the predictor *Positive Sibling Relationship* on the outcome *Team Functioning at the Social Reflexivity Level*. Bearing in mind Appendix I (Output 3), it is possible to conclude there is a significant total effect of *Negative Sibling Relationship* on *Team Functioning at the Social Reflexivity Level* ( $p<.05$ ) and an unstandardized negative small coefficient ( $B=-.17$ ;  $SE=.07$ ). Approximately 6% of the variance in *Team Functioning at the Social Reflexivity Level* was accounted by *Positive Sibling Relationship* ( $R^2=.06$ ). Additionally, gender produces a negative significant effect on this relationship ( $B=-.17$ ;  $SE=.04$ ;  $p<.05$ ).

By means of answering the fifth question- *Does a Negative Sibling Relationship relate to Team Functioning at the Task Reflexivity Level?* – considering the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is shown on the Pearson Correlations table (Appendix E) there is a small significant negative relationship between a *Negative Sibling Relationship* and *Team Functioning at the Task Reflexivity Level* ( $r=-.12$ ;  $p<.05$ ). Albeit it seems like *FWE* does not mediate a *Negative Sibling Relationship* and *Task Reflexivity*, in order to answer the fifth sub question- *Does a Negative Sibling Relationship produce a total effect on Team Functioning at the Task Reflexivity Level?* - unstandardized coefficients (B) were estimated for the total effect of the predictor *Negative Sibling Relationship* on the outcome *Team Functioning at the Task Reflexivity Level*. Bearing in mind Appendix J (Output 3), it is possible to conclude there is a significant total effect of *Negative Sibling Relationship* on *Affective Commitment* ( $p<.05$ ) and an unstandardized negative small coefficient ( $B=-.15$ ;  $SE=.07$ ). Approximately 6% of the variance in *Affective Commitment* was accounted by *Positive Sibling Relationship* ( $R^2=.06$ ).

By means of answering the sixth question- *Does a Negative Sibling Relationship relate to Affective Commitment?* – considering the psychometrics properties of latent variables, Pearson correlations values ( $r$ ) were calculated (Appendix E). As it is shown on the Pearson Correlations table (Appendix E) there is a non-significant negative relationship between a *Negative Sibling*



*Relationship* and *Affective Commitment* ( $r=-.031$ ,  $p=n.s.$ ). The significance of this value backs up the scenario in which *FWE* does not mediate a *Negative Sibling Relationship* and *Affective Commitment*. Albeit this fact, information regarding the total effect of a *Negative Sibling Relationship* on *Affective Commitment* can be found on Appendix K (Output 3).

In light of all the former results, it is viable to state the quality of sibling relationship does impact the team fitness at the social and task reflexivity level, in such a way a positive sibling relationship is associated with being a good teammate at the social and task reflexivity level; whereas a negative sibling relationship is linked to harmed team functioning at the social and task reflexivity level. Even more, both warmth and conflicting sibling relationships have a significant total effect on team functioning at the social and task reflexivity level. The total effect of a positive sibling relationship on social reflexivity for women decreases when compared to men. On a similar fashion, the total effect of a negative sibling relationship on social reflexivity also decreases for women when compared to men. Additionally, the greater the positive sibling relationship value is, the greater affective commitment to the enterprise will be; but a reported negative sibling relationship produces no impairments in affective commitment to the enterprise. Wherefore, solely a warm sibling relationship has a significant total effect on affective commitment. Participants who have been working on their company longer score higher for the impact of a warm sibling relationship on affective commitment. It must be kept in mind that, to analyse mediator effects, a significant total effect alone means little, because the proposed mediator is not being controlled.

#### **4.5. Does FWE mediate the quality of the sibling relationship and social-affective work variables?**

The fourth and final main goal of the current thesis was to study the positive side of Family-Work interface, more specifically to study *FWE*. For the purpose of accomplishing this goal, six questions were articulated.

With the aim of answering the first question- *Does FWE mediate a Positive Sibling Relationship and Team Functioning at the Social Reflexivity Level?* – considering the psychometrics properties of latent variables, unstandardized coefficients (B) were estimated for the direct and indirect effects of the predictor (*Positive Sibling Relationship*) on the outcome (*Team*

*Functioning at The Social Reflexivity Level*), while controlling the mediator (*FWE*). The indirect effect was tested using a bootstrap estimation approach with 1000 samples (Hayes, 2013). According to Appendix F (Output 4), the table showcases a positive significant indirect coefficient ( $B = .05$ ;  $SE = .02$ ; 95% CI = .01, .10). Plus, the direct effect is positive and significant ( $B = .12$ ;  $SE = .02$ ;  $p < .05$ ). Because indirect and direct effect are significant and point at the same direction (Zhao et al., 2010) it is feasible to conclude complementarily mediated by *FWE*, having a *Positive Sibling Relationship* is associated with scoring 0.5 points higher on *Team Functioning at the Social Reflexivity Level*. Complementary mediation overlaps with Baron's and Kenny's partial mediation concept (Zhao et al., 2010).

With the aim of answering the second question- *Does FWE mediate a Positive Sibling Relationship and Team Functioning at the Task Reflexivity Level?* – considering the psychometrics properties of latent variables, unstandardized coefficients ( $B$ ) were estimated for the direct and indirect effects of the predictor (*Positive Sibling Relationship*) on the outcome (*Team Functioning at The Task Reflexivity Level*), while controlling the mediator (*FWE*). The indirect effect was tested using a bootstrap estimation approach with 1000 samples (Hayes, 2013). According to Appendix G (Output 4), the table showcases a positive significant indirect coefficient ( $B = .05$ ;  $SE = .02$ ; 95% CI = .01, .10). Plus, the direct effect is positive and non-significant ( $B = .07$ ;  $SE = .06$ ;  $p = \text{n.s.}$ ). Because indirect effect is significant but direct one is non-significant (Zhao et al., 2010) it is feasible to conclude indirectly mediated by *FWE*, having a *Positive Sibling Relationship* is associated with scoring 0.7 points higher on *Team Functioning at the Task Reflexivity Level*. Indirect mediation overlaps with Baron's and Kenny's total mediation concept (Zhao et al., 2010).

With the aim of answering the third question- *Does FWE mediate a Positive Sibling Relationship and Affective Commitment?* – considering the psychometrics properties of latent variables, unstandardized coefficients ( $B$ ) were estimated for the indirect effects of the predictor (*Positive Sibling Relationship*) on the outcome (*Affective Commitment*), while controlling the mediator (*FWE*). The indirect effect was tested using a bootstrap estimation approach with 1000 samples (Hayes, 2013). According to Appendix H (Output 4), the table showcases a positive significant indirect coefficient ( $B = .10$ ;  $SE = .04$ ; 95% CI = .04, .19). Plus, the direct effect is positive and non-significant ( $B = .09$ ;  $SE = .06$ ;  $p = \text{n.s.}$ ). Because indirect is significant but direct is non-significant (Zhao et al., 2010) it is feasible to conclude indirectly mediated by *FWE*, having a

*Positive Sibling Relationship* is associated with scoring .09 points higher on *Affective Commitment*. Indirect mediation overlaps with Baron's and Kenny's total mediation concept (Zhao et al., 2010).

Throughout the results outline, it has become dubious whether *FWE* does mediate or not a *Negative Sibling Relationship* and *Team Functioning* at the *Social Reflexivity Level* (question four). Unstandardized coefficients (B) were estimated for the direct and indirect effects of the predictor (*Negative Sibling Relationship*) on the outcome (*Team Functioning* at the *Social Reflexivity Level*), while controlling the mediator (*FWE*), which can be found in Appendix I (Output 4). While a non-significative indirect effect was displayed ( $B = -0.03$ ;  $SE = .02$ ; 95% CI =  $[-.06, .01]$ ), the direct effect was negative and significant ( $B = -.15$ ,  $SE = .05$ ;  $p < .05$ ); going on the same direction as the total effect, which was significant. This result should be interpreted with high levels of caution, since it is not clear whether this is the case of an indirect mediation or a non-mediation with a direct effect of the predictor on the outcome (Zhao et al., 2010). The specificity of this mediation interpretation will be later discussed in more depth.

Also, throughout the results outline, it has become dubious whether *FWE* does mediate or not a *Negative Sibling Relationship* and *Team Functioning* at the *Task Reflexivity Level* (question fifth). Unstandardized coefficients (B) were estimated for the direct and indirect effects of the predictor (*Negative Sibling Relationship*) on the outcome (*Team Functioning* at the *Task Reflexivity Level*), while controlling the mediator (*FWE*), which can be found in Appendix J (Output 4). A non-significative indirect effect confirmed the absence of *FWE* mediation between a *Negative Sibling Relationship* and *Team Functioning* at the *Task Reflexivity Level* ( $B = -.03$ ; 95% CI =  $[-.08, .01]$ ). Because the direct effect is negative and non-significative ( $B = -.12$ ,  $SE = .07$ ;  $p = n.s.$ ) while total effect is significant, it becomes feasible to state this is the case of a non-mediation, even though there is a direct effect (Zhao et al., 2013) of a *Negative Sibling Relationship* on *Task Reflexivity*.

The results have been strongly indicating *FWE* does not mediate a *Negative Sibling Relationship* and *Affective Commitment* (question six). Nevertheless, unstandardized coefficients (B) were still estimated for the direct and indirect effects of the predictor (*Negative Sibling Relationship*) on the outcome (*Affective Commitment*), while controlling the mediator (*FWE*), and can be found in Appendix K (Output 4). A non-significative indirect effect confirmed the absence of *FWE* mediation between a *Negative Sibling Relationship* and *Affective Commitment* ( $B = -.04$ ;  $SE = .03$ ; 95% CI =  $[-.11, .02]$ ). Direct effect has also shown to be non-significative ( $B = .01$ ;  $SE = .08$ ;

$p=n.s$ ). As shown last section, total effect was non-significant as well. Therefore, this is indeed the case of a no mediation with no effect of the predictor on the outcome variable (Zhao et al., 2010).

Out of the six mediation models hypothesised, FWE tends to mediate a warm sibling relationship and social-affective workplace variables but the case is not so clear for the three models which include conflicting sibling relationship as a predictor. Based on all these analyses together, FWE, complementarily mediates a positive sibling relationship and team functioning at the social reflexivity level; FWE indirectly mediates a positive sibling relationship and team functioning at the task reflexivity level; FWE indirectly mediates a positive sibling relationship and affective commitment; FWE indirectly mediates a negative sibling relationship and social reflexivity or FWE does not mediate these variables but the direct effect between the predictor and outcome exists; FWE does not mediate a negative sibling relationship and task reflexivity but the direct effect between the predictor and outcome exists; nor FWE mediates a negative sibling relationship and affective commitment, nor a direct effect exists between these the predictor and the outcome (Figure 2).

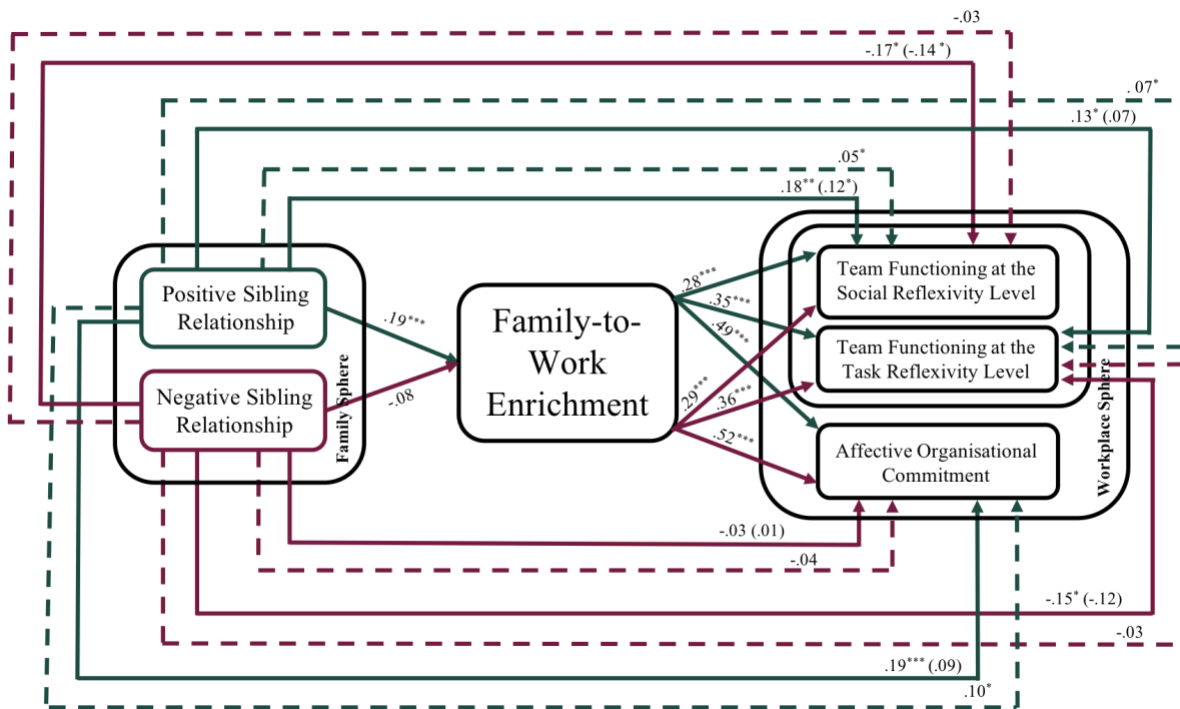


Figure 2. Results Model.

Note Green lines represent the mediator models in which a positive sibling relationship was the predictor. Red lines represent the mediator models in which a negative sibling relationship was the predictor. Dashed lines indicate the indirect effects. On the full line from the predictor to the outcome, first is presented the total effect and in brackets the direct effect. \*:  $p < .05$ ; \*\*:  $p < .01$ ; \*\*\*:  $p < .001$ .

## 5. Discussion

### 5.1. Discussion Outline

The present study aimed to answer four main goals.

Concerning the first main goal - to study the quality of the sibling relationship - the descriptive analysis has shown, during adulthood is more prevailing to have a warm relationship amid siblings. Digging more specifically into the features of the adult sibling relationship, it was concluded people who were brought up with a larger number of siblings are the ones who perceive their sibling relationship as more positive and that men perceive a more conflicting relationship among their siblings than woman. These effects are in line with the ongoing literature, which states how during adulthood the sibling relationship tends to improve its quality due to the shrinkage of rivalry (Conger & Little, 2010) and voluntary efforts made to maintain the bond (Lee et al., 1990; Stocker et al., 1997) and that men tend to compete more with their siblings (Stewart et al., 1998) which might explain a more negative perceived relationship.

Correlational analyses have pointed out the warmer the sibling relationship is greater FWE will be, which is consistent with Grennhaus and Powel's model (2006) of Work-Family Enrichment as well as the definition conceptualised by Carlson et al. (2006). In line with this result, it was questioned whether both positive and negative relationship predict FWE. Unstandardized coefficients revealed this was only the case for a positive sibling relationship. Regarding FWE, this construct was recognised by the participants and younger participants are the ones who report it the most. One explanation for this detail would be the coexistence of family-work conflict and enrichment for participants who are parents. The layer of younger workers probably includes the ones who just entered the workforce, who are not married and who are not yet parents. Ongoing research supports the idea employees with children under the age of six years old are the ones who experience higher work-family conflict (Grzywacz & Bass, 2003), even if work-family conflict it's a variable which will always impact the quality of parenting, acknowledging the fact work-family conflict also impacts parenting relationships when children are older than six years (Bennett et al., 2017; Fontaine, 1985).

The second main goal was to study social-affective work variables; a label used in the present thesis to cover on the same umbrella affective organisational commitment and team

functioning at the social and task reflexivity level. Descriptive analysis made possible to infer participants succeed in bonding with their enterprise and they are integrated in teams whose functioning is fair at the social and task reflexivity level. Results that account for social reflexivity show men are more prone to report social reflexivity. The fact men have reported higher values for social reflexivity than women could match social support theory; a theory which forecast men are more susceptible to work variables, while women are more prone to family variables (Dilworth & Kingsbury, 2005; Leavy, 1983). Besides, according to this theory, mothers are also the ones who tend to experience significantly more work-family interference because mothers are the ones who occupy more time to household chores and child care, independently of the life cycle (Dilworth, & Kingsbury, 2005). Still regarding social reflexivity, the longer one works for an enterprise, higher reported will social reflexivity be, which could potentially be connected to affective commitment. On what regards task reflexivity, older workers, in terms of chronological age, tend to report higher levels of this measure while the ones who have been working at the company for longer report lower levels of task reflexivity; which contradicts intuitive reasoning. This result backs up the notion age and tenure produce independent effects on workers (Nascimento et al., 2008). Plus, it seems people who were brought among more siblings are the ones who tend to report upper task reflexivity. Particularly this result is in line with EST, since it's viable to suspect the same way siblings from larger families are used to share more tasks at home, they replicate this at work. Plus, people who were brought among more siblings are also the ones who tend to report upper affective commitment. Again, this result could also mirror EST. Finally, the longer workers have been working for their company, higher will affective commitment be, which is in line with other studies (e.g. Chambel & Castanheira, 2012; Meyer & Allen, 1997; Nascimento et al., 2008).

Correlational analyses between affective commitment, social and task reflexivity echo the decision to study together affective commitment, social reflexivity and task reflexivity as possible FWE outcomes. In light of POS assumptions, team functioning - at the social reflexivity and task reflexivity level - and organisational commitment were both considered as dependent variable/FWE outcomes, as some authors have already contemplated team variables and organisational commitment in the same model (Bishop et al., 2000; Howes et al., 2000) due to their social affective nature. The three social-affective variables have been shown to be moderately related, backing up the conceptualisation of them as FWE outcomes.

Three questions and six sub-questions have been formulated to access the FWE outcome nature of socio-affective variables. Firstly, correlation analyses between social-affective variables and FWE indicate individuals who better manage to transfer family resources to their workplace are the ones who better contribute to team functioning, both at the social and task reflexivity level; as well are the ones who will have a greater level of affective commitment to their organisation. Nevertheless, on a controversial fashion, despite the fact a negative sibling relationship is not correlated to FWE, nor does predict FWE; the three dependent variables- affective commitment, social and task reflexivity- are all outcomes of FWE, both via positive and negative sibling relationship. Surprisingly FWE produces higher effect values on affective commitment, social and task reflexivity via negative relationship and not via positive sibling relationship. An explanation for this is hard to conceive in light of RGD or SET or EST; yet this could point out one or more variables moderate the relationship between the mediator and the outcome variables (moderated mediation (Hayes, 2013)). Once again, the fact men have reported higher values for social reflexivity as a FWE outcome could match social support theory. Finally, it was demonstrated workers who have been longer working at the enterprise are the ones who report higher affective commitment as a FWE outcome, independently of a perceived warm or conflicting sibling relationship, again, mirroring EST.

The third main goal was to study the relationships between the quality of the sibling relationship and social-affective work variables. On the eyes of correlational analyses, it is viable to state the quality of sibling relationship does impact the team fitness at the social and task reflexivity level, in such a way a positive sibling relationship is associated with being a good teammate at the social and task reflexivity level; whereas a negative sibling relationship is linked to harmed team functioning at the social and task reflexivity level. Together these results go in the same direction as other published researches proving sibling relationship generates relational-affective resources (Alarcão, 2002; Relvas, 1996; Ferreira, 2009; Baumeister & Leary, 1995). Solely a warm sibling relationship has a significative total effect on affective commitment. Participants who have been working on their company longer, score higher for the impact of a warm sibling relationship on affective commitment, which is rather interesting considering SET.

Six sub-questions have been raised to broader understanding on main goal III. Results showcase both warmth and conflicting sibling relationships have a significative total effect on team functioning at the social and task reflexivity level. The total effect of a positive sibling

relationship on social reflexivity for women decreases when compared to men; on a similar fashion, the total effect of a negative sibling relationship on social reflexivity for women is lower when compared to men - congruent with former results on the present study on gender and team functioning. Additionally, the greater the positive sibling relationship value is, the greater affective commitment to the enterprise will be; but a reported negative sibling relationship produces no impairments on the ability one has to bound to their company.

The fourth and final main goal was to study the positive side of family-work enrichment, thus six questions on its role as a mediator were created. Family-to-work enrichment states resources developed within the family domain allow a better quality of the workplace role and upward one's job performance (Carlson et al., 2006; Greenhaus & Powell, 2006). If according to RGD, the improved system functioning is due to resources, then it becomes plausible to question enrichment from one domain to another has mediated the process. The results show a pattern in which a positive sibling relationship and social-affective results are mediated by FWE; but the scenario is not that obvious for a negative sibling relationship.

FWE, complementarily mediates a positive sibling relationship and team functioning at the social reflexivity level. Complementary mediation means that the mediated effect and direct effect both exist and point at the same direction. However, possibly, besides FWE, there is another omitted mediator or mediators (Zhao et al., 2010).

FWE indirectly mediates a positive sibling relationship and team functioning at the task reflexivity level. Indirect mediation means there is evidence for the proposed mediator and in light of the non-significant direct effect, FWE is the only variable that mediates the independent and dependent variable (Zhao et al., 2010).

On a similar manner, FWE indirectly mediates a positive sibling relationship and affective commitment. Again, due to indirect mediation, FWE is most likely the only variable which mediates positive sibling relationship and affective commitment, since direct effect of the predictor on the outcome (controlling the mediator) is non-significant (Zhao et al., 2010).

Prudence must be used to understand the mediator role of FWE on a negative sibling relationship and social reflexivity. Recalling the unstandardized effects, results have displayed a non-significant effect of the predictor on the mediator ( $B=-.08$ ), a positive significant effect of the mediator on the outcome (through the effect of the predictor) ( $B=.29$ ), a significant negative total effect of the predictor on the outcome ( $B=-.17$ ), a significant negative direct effect of the predictor



on the outcome ( $B=-.14$ ) and a non-significant negative indirect effect of the predictor on the outcome ( $B=-.03$ ). Hence, according to different criterion, two conclusions can be drawn (Zhao et al., 2010). The first scenario would be the case of an indirect mediation because the significance of the predictor on the mediator is not mandatory to access mediation. Here, another mediator which was omitted on the model could be producing a significant effect, even though FWE mediates some of the relationship between a negative sibling relationship and social reflexivity. The second scenario would be the case of solely a direct effect of the predictor on the outcome, because the predictor produces a significant direct effect on the mediator. If this is the case, another variable could mediate the relationship between a negative sibling relationship and social reflexivity, but it is already known that this variable will not be FWE. I would like to add another hypothesis of a moderated mediation (Hayes, 2013) effect, perhaps with gender, since after controlling gender, it has been verified it significantly impacts the total effect of the predictor on the outcome.

FWE does not mediate a negative sibling relationship and task reflexivity but the direct effect exists between the predictor and the outcome. Once the total effect is significative it is possible to consider other variables mediating the predictor and the outcome, but not FWE.

Finally, FWE does not mediate a negative sibling relationship and affective commitment nor a direct effect exists between these two variables, which was predictable since these two variables were not significantly correlated on the first place.

## **5.2. Strengths and Limitations**

The foremost strength of the present thesis is the fact the uncharted waters of the relationships between siblings' relationship and organisational functioning have been explored. The current study embraces an exploratory nature, since to our knowledge no other published studies have related the sibling relationship with FWE or workplace sphere variables, minus a master's thesis (Henriques, 2017). This being the case, this thesis hopes to tackle down three identified literature gaps: the small number of researches on the adult sibling relationship, studies relating sibling relationship with FWE and studies relating social-affective variables with the family domain. In addition, an active effort was made to answer two major literature calls - to dig deeper how units of family generate resources valuable to the work domain (Frone, 2003) and to include team variables on the work-family domain studies (Hunter et al., 2010). Furthermore, it

has been flourishing in literature the need to pursue with outcomes of enrichment related (directedly or indirectly) with capital gains (Hunter et al., 2010), which is the case for both affective commitment and team functioning, through effectiveness, enhanced performance and by preventing turnover (e.g. Arachchige & Robertson, 2016; Hunt & Morgan, 1994; Mathieu & Zajac, 1990; Meyer et al., 2002; Monday, 1998; Richter, et al., 2011; Riketta, 2008; Rosen, et al., 2018; Somech et al., 2009; West, 2012a; West, et al., 2002).

Notwithstanding, this study is not without limitations. Firstly, in light of its exploratory analysis, a mix design could had strengthened the results. A convenience sample was used therefore cannot be generalised to the broader population as a result of under-representative generated bias. As a matter of fact, taking a look at the sample's socio-demographic features, it seems like the participants are from a more privileged context, since the majority hold a university degree and are married. The sample should also be quantitatively amplified. Secondly, the scales are self-reported, making them prone to bias regarding the interpretation of items, the qualitative meaning of the Likert-scale used to answer the items, social desirability and the degree to which scales really allow to measure interval data and not ordinal data. Thirdly, group comparisons should had been conducted to enrich the results. It would had been very pertinent to compare the means of siblings and only child and to perform analysis of covariance instead of just controlling it. Neither of these comparisons was conducted due to time and methodological constraints. Plus, even though the ASRQ and the TF scale have been used in Portugal several times before, these two measures are still awaiting a validation to the Portuguese context. A final limitation to consider is the cross-sectional design. Mediation is assumed to be a temporally ordered longitudinal process (Mascha et al., 2013), but, estimation in most mediation studies, just like the present one, has been cross-sectional and unable to explore this assumption.

### **5.3. Implications and Future Directions**

Owing to the fact this study was exploratory, replications are highly desirable to corroborate or not the results.

In line with research design trends (e.g. Bhargava & Baral, 2009; Siu, Lu, Brough, Lu, & Bakker, 2010), the mediator role of WFE should also be included on the models.

In light of the limitations pointed out, future research on this topic could expand the sample in terms of quantity and quality, could compare siblings an only child on FWE, team functioning

and affective commitment using a t-test scores and/or conduct an analysis of covariance on the direct and indirect effects.

In light of the results, FWE indirectly mediates a positive sibling relationship and social reflexivity. Likewise, it is necessary to understand which other mediator variables are missing in this model. The inconclusive role of FWE mediating a negative sibling relationship and social reflexivity yells for an answer to fully understand if this is the case of just a direct effect or, if this is the case of an indirect mediation (therefore at least another mediator is missing in the model). It has also been hypothesised if a moderated mediation with gender would be able to shed understanding over how these three variables relate after all. Despite the fact FWE does not mediate negative sibling relationship and task reflexivity, there is a significant direct effect between a negative sibling relationship and task reflexivity, so it would be noteworthy to understand which variable or variables could be mediating a negative sibling relationship and task reflexivity. Gender and tenure have only shown a significant effect on both mediation models with social reflexivity and affective commitment respectively. Therefore, it might be hypothesised if these control variables produce a moderated mediation (Hayes, 2013).

#### **5.4. Practical Implications**

The present study has several practical implications to the organisations. For the organisational setting, all implications endorse the idea if people perceive greater enrichment between both spheres, workers will reciprocate with positive attitudes towards the organisational role (Carvalho, 2016; McNall et al., 2009). For this reason, organisations should focus on lessening the perception of conflict and boosting the perception enrichment (Carvalho & Chambel, 2016). Work-family enrichment positively impacts work, non-work and health related variables (McNall et al., 2010). Therefore, organisations should consider implementing measures related to these three set variables and avoiding focusing only on work-related variables, such as the widespread flexible work arrangements or leaves. It might be important to invest on dependent-care assistance (e.g. Frone, 2003) or more creative ideas such as workshops or lectures on the mental health on the workplace or on managing multiple roles. However, because the realm of each organisation is unique, organisations should also promote a shared debate on each policies will have a broader impact in their matchless setting. Carvalho (2016) showed the work-family relationship falls under the category of conflict or enrichment depending on perceived autonomy, support and demands.

These three variables should also be considered when reflecting each cluster of measures to be applied given the organisation realm. Echoing EST, it could be a gamechanger to promote a co-constructed dialogue between employers and employees work-family policies which boost enrichment. It seems a good solution for the organisations to become aware of everyone's perceived needs and for both parties to comprehend the lenses of the other.

For health and clinical psychology, at the educational and therapeutic settings, the present dissertation reinforces the neglected idea that relationships between siblings should also be a relevant issue. More specifically, in family, parental and couples' therapy settings, this study supports the idea that parents should nurture the relationship between their children. Moreover, when work related problems are being issued by patients, given Greenhaus and Powell's model, therapists could also focus on promoting a better relationship among siblings and facilitating the transference of these resources from the family to the work domain.

At political level the present results point out the need to effectively support families and family therapy services, which may provide added value for a better family life and for organisational and economic success.

## **6. Conclusion**

Family roles allow a better quality of the workplace role and upward one's job performance and organisational efficacy. The current thesis aimed to tackle the relationship between sibling relationship and social-affective variables (affective commitment, social and task reflexivity) and to comprehend if these relationships were mediated by FWE. On a nutshell, the present study has demonstrated the social skills which grow through the relationship between siblings not only are an important familiar resource but also can be useful in other microsystems besides the family, like the workforce. According to the present results, on the one hand, a warm relationship amid siblings is related to be a good team player and to be able to commit to the enterprise. On the other hand, a conflicting sibling relationship impairs team functioning and is not related to the ability to commit to the organisation. Holistically speaking, while FWE is a mediator between a positive quality of the sibling relationship and workplace social-affective variables, it is not so clear if FWE mediates a negative sibling relationship and social-affective workplace variables.

## 7. References

- Aboim, S. (2010). Género, família e mudança em Portugal. In K. Wall, S. Aboim, & V. Cunha (eds.), *A vida familiar no masculino: negociando velhas e novas masculinidades* (pp. 39-66). Lisboa: CITE.
- Akintayo, D. I. (2010). Work-family role conflict and organizational commitment among industrial workers in Nigeria. *Journal of Psychology and Counseling*, 2(1), 1-8.
- Alarcão, M. (2002). *(Des)Equilíbrios familiares: Uma visão sistémica*. Coimbra: Quarteto.
- Allen, N. J., & Meyer, J. P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behaviour*, 49(3), 252-276.
- Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta- analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology*, 16(2), 151-169. doi:10.1037/a0022170.
- Arachchige, B. J. H., & Robertson, A. (2016). The effect of human resource management high performance work practices on organisational outcomes: a Sri Lankan perspective. *Sri Lankan Journal of Human Resource Management*, 5(1), 17–30. doi: <http://doi.org/10.4038/sljhrm.v5i1.5625>.
- Aryee, S., Srinivas, E. S., & Tan, H. H. (2005). Rhythms of life: Antecedents and outcomes of work-family balance in employed parents. *Journal of Applied Psychology*, 90(1), 132–146.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Baral, R., & Bhargava, S. (2010). Work-family enrichment as a mediator between organizational interventions for work-life balance and job outcomes. *Journal of Managerial Psychology*, 25(3), 274-300. <https://doi.org/10.1108/02683941011023749>.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173.

Bauer, T. N., Morrison, E. W., & Callister, R. R. (1998). Organizational socialization: A review and directions for future research. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (pp. 149-214). Greenwich, CT: JAI.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.

Bedford, V. H., & Avioli, P. S. (2001). Variations on Sibling Intimacy in Old Age. *Generations*, 25(2), 34-40.

Bennett, M. M., Beehr, T. A., & Ivanitskaya, L. V. (2017). Work-family conflict: differences across generations and life cycles. *Journal of Managerial Psychology*, 32(4), 314-322. doi:10.1108/JMP-06-2016-0192.

Bhargava, S., & Baral, R. (2009). Antecedents and consequences of work-family enrichment among Indian managers. *Psychological Studies*, 54(3), 213–225. doi:<http://dx.doi.org/10.1007/s12646-009-0028-z>.

Bianchi, S.M., & Milkie, M.A. (2010). Work and Family Research in the First Decade of the 21st Century. *Journal of Marriage and Family*, 72(3), 705-725.

Bishop, J. W., Scott, K. D., & Burroughs, S. M. (2000). Support, commitment, and employee outcomes in a team environment. *Journal of Management*, 26(6), 1113-1132.

Blaney, P. H., & Ganellen, R. J. (1990). Hardiness and social support. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 297–318). New York: Wiley.

Blau, P. M. (1964). *Exchange and power in social life*. New York: John Wiley.

Brockner, J. (1988). *Self-esteem at work*. Lexington, MA: Lexington Books.

Brody, G. H. (1998). Sibling relationship quality: Its causes and consequences. *Annual Review of Psychology*, 49(1), 1-24.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723-742. doi:10.1037/0012-1649.22.6.723.

Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nuture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101(4), 568-586.

Buljac-Samardzic, M., van Wijngaarden, J. H., van Wijk, K. P., & van Exel, N. A. (2011). Perceptions of team workers in youth care of what makes teamwork effective. *Health & Social Care in The Community*, 19(3), 307-316.

Cáceres-Delpiano, J. (2006). The Impacts of Family Size on Investment in Child Quality. *The Journal of Human Resources*, 41(4), 738-754.

Cameron, K. S., Dutton, J. E., & Quinn, R. E. (2003). Foundations of Positive Organizational Scholarship. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive Organizational Scholarship: Foundations of a new discipline*. San Francisco: Berrett-Koehler.

Carter, S.M., & West, M.A. (1998). Reflexivity, effectiveness, and mental health in BBC-TV production teams. *Small Group Research*, 29(5), 583-601.

Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behaviour*, 68(1), 131-164. doi:10.1016/j.jvb.2005.02.002.

Carlson, D. S., Grzywacz, J. G., & Zivnuska, S. (2009). Is work-family balance more than conflict and enrichment? *Human Relations*, 62(10), 1459-1486. doi:10.1177/0018726709336500.

Carvalho, V. S. G. (2016). A relação trabalho-família: o desafio para ontem. (Doctoral Dissertation). Lisbon University, Lisbon. Retrieved from [http://repositorio.ul.pt/bitstream/10451/23633/1/ulsd072691\\_td\\_Vania\\_Carvalho.pdf](http://repositorio.ul.pt/bitstream/10451/23633/1/ulsd072691_td_Vania_Carvalho.pdf).

Carvalho, V. S., & Chambel, M. J. (2016). Perceived high-performance work systems and subjective well-being: Work-to-family balance and well-being at work as mediators. *Journal Of Career Development*, 43(2), 116-129. doi:10.1177/0894845315583113.

Carvalho, V. S., & Chambel, M. J. (2014). Work-to-family enrichment and employees' well-being: High performance work system and job characteristics. *Social Indicators Research*, 119(1), 373-387. doi:10.1007/s11205-013-0475-8.

Chambel, M. J., & Castanheira, F. (2012). Training of Temporary Workers and the social exchange process. *Journal of Managerial Psychology*, 27(2), 191-209.

Cicirelli, V. G. (1991). Sibling relationships in adulthood. *Marriage & Family Review*, 16(3-4), 291-310. doi:10.1300/J002v16n03\_05.

Clark-Carter, D. (2009). *Quantitative Psychological Research: The Complete Student's Companion*. New York: Psychology Press.

Cohen, A. (2007). Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review*, 17(3), 336-354.

Cohen, J. W. (1988). *Statistical power analysis for the behavioural sciences* (2<sup>nd</sup> ed). Hillsdale, NJ: Lawrence Erlbaum Associates.



Conger, K. J., & Little, W. M. (2010). Sibling Relationships During the Transition to Adulthood. *Child Development Perspectives*, 4(2), 87-94. doi:10.1111/j.1750- 8606.2010.00123.x.

Connidis, I. A. (1992). Life transitions and the adult sibling tie: A qualitative study. *Journal of Marriage and the Family*, 54(4), 972-982.

Connidis, I. A. (2010). *Family ties and aging*. Thousand Oaks, CA: SAGE.

Cooper-Hakim, A., & Viswesvaran C. (2005). The Construct of Work Commitment: Testing an Integrative Framework. *Psychological Bulletin*, 131(2), 241–259.

Cordery, J. L. (2004). Another case of the Emperor's new clothes. *Journal of Occupational and Organizational Psychology*, 77(4), 481-484.

Costa, P., Passos, A., M., & Bakker, A. (2014). Empirical Validation of the Team Work Engagement Construct. *Journal of Personnel Psychology*, 13(1): 34–45. DOI: 10.1027/1866-5888/a000102.

Cox, T. Jr. (1993). *Cultural diversity in organizations: Theory, research and practice*. San Francisco: Berrett-Koehler.

Crain, T. L., & Hammer, L. B. (2013). Work–family enrichment: A systematic review of antecedents, outcomes, and mechanisms. In B. A Bakker (Ed.), *Advances in positive organisational psychology* (pp. 303-328). Bingley, UK: Emerald Group Publishing Limited.

Cropanzano, R., & Mitchell, M. (2005). Social exchange theory: an interdisciplinary review. *Journal of Management*, 31(6), 874-900.

Crouter, A. C. (1984). Spillover from family to work: The neglected side of the work–family interface. *Human Relations*, 37(6), 425–442.

Curral, L. A. S. (2005). *Sharedness in work team innovation: a process model of team regulation* (unpublished doctoral dissertation). Lisbon University, Lisbon.

Delarue, A., Hootegem, G., Procter, S., & Burridge, M. (2008). Teamworking and organizational performance: a review of survey-based research. *International Journal of Management Reviews*, 10(2), 127–148.

Dias, C. S. (2017). Parentalidade, um vínculo permanente: o papel mediador do Enriquecimento Família-Trabalho na relação entre os Estilos Parentais e a Liderança Transformacional (Unpublished master's thesis). Lisbon University, Lisbon. Retrieved from <http://hdl.handle.net/10451/32966>.

Dilworth, J. L., & Kingsbury, N. (2005). Home-to-Job Spillover for Generation X, Boomers, and Matures: A Comparison. *Journal of Family & Economic Issues*, 26(2), 267. doi:10.1007/s10834-005-3525-9.

Irish, D. P. (1964). Sibling Interaction: A Neglected Aspect in Family Life Research. *Social Forces*, 42(3), 279–288, doi:10.1093/sf/42.3.279.

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., Brinley, A. (2005). Work-family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behaviour*, 66(1), 124–197.

Edwards, J., & Rothbard, N. (2000). Mechanisms Linking Work and Family: Clarifying the Relationship between Work and Family Constructs. *The Academy of Management Review*, 25(1), 178-199.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500-507.

Eriksen, S., & Jensen, V. (2006). All in the Family? Family Environment Factors in Sibling Violence. *Journal of Family Violence*, 21(8), 497-507.

Eurostat (2008). Key figures on Europe (2009 edition). Luxembourg: European Commission.

Eurostat (2018). Europe 2020 employment indicators. Luxembourg: European Commission.

Fairchild, A. J., & Mackinnon, D. P. (2010). A General Model for Testing Mediation and Moderation Effects. *Prevention*, 10(2), 87–99. <http://doi.org/10.1007/s11121-008-0109-6.A>.

Fay, D., Shipton, H., West, M. A., & Patterson, M. (2015). Teamwork and Organizational Innovation: The Moderating Role of the HRM Context. *Creativity & Innovation Management*, 24(2), 261-277. doi:10.1111/caim.12100.

Fernandes, O. M., Alarcão, M., & Raposo, J. V. (2007). Posição na fratria e personalidade. *Estudos de Psicologia (Campinas)*, (3), 297. doi:10.1590/S0103-166X2007000300001.

Ferreira, C. C. (2009). Perceção de Conflito na Relação de Irmãos Adultos (unpublished master's thesis). Porto University, Porto.

Retrieved from  
[https://webcache.googleusercontent.com/search?q=cache:UPEYnlBa\\_88J:https://sigarra.up.pt/fpceup/pt/pub\\_geral.show\\_file%3Fpi\\_gdoc\\_id%3D565271+&cd=1&hl=pt-PT&ct=clnk&gl=pt&client=safari](https://webcache.googleusercontent.com/search?q=cache:UPEYnlBa_88J:https://sigarra.up.pt/fpceup/pt/pub_geral.show_file%3Fpi_gdoc_id%3D565271+&cd=1&hl=pt-PT&ct=clnk&gl=pt&client=safari).

FFMS (2017). *Retrato de Portugal na Europa*. Lisboa: PORDATA. Disponível em dezembro, 15, 2017 em <https://www.ffms.pt/FileDownload/23be94a2-68cd-41fa-8e04-fa67df7f0213/retrato-de-portugal-na-europa-2017>.

FFMS (2018a). *Dimensão média dos agregados domésticos privados*. Lisboa: PORDATA. Retrieved September 01, 2018, from  
<https://www.pordata.pt/Portugal/Dimensão+média+dos+agregados+domésticos+privados+-511>.

FFMS (2018b). *Agregados domésticos privados: total e por tipo de composição*. Lisboa: PORDATA. Retrived September 01, 2018, from <https://www.pordata.pt/DB/Portugal/Ambiente+de+Consulta/Tabela>.

FFMS (2018c). *Agregados domésticos unipessoais de indviudos com 65 anos ou mais em percentagem*. Lisboa: PORDATA. Retrived September 01, 2018 from <https://www.pordata.pt/Portugal/Agregados+domésticos+unipessoais+de+indiv%C3%ADduos+com+65+ou+mais+anos+em+percentagem+do+total+de+agregados-2271>.

Fontaine, P. (1985). Familles Saines. *Thérapie Familiale*, 6(3), 267-282.

Fontaine, A., Andrade, C., Matias, M., Gato, J., & Mendonça, M. (2007). Family and work division in dual-earner families in Portugal. In I. Crespi (Ed.), *Gender mainstreaming and family policy in Europe: Perspectives, research and debates* (pp. 167-178). Italy: Vita e Pensiero.

Fortuna, K., Roisman, G. I., Haydon, K. C., Groh, A. M., & Holland, A. S. (2011). Attachment state of mind and the quality of young adults' sibling relationships. *Developmental Psychology*, 47(5), 1366–1373. doi:10.1037/a0024393.

Frone, M., R. (2003). Work–family balance. In J. C. Quack & L. E. Tetrick (Eds), *Handbook of occupational health psychology*, (pp. 13–162). Washington, DC: American Psychological Association.

Frone, M. R., Russell, M., & Cooper, M. L. (1992a). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. *Journal of Applied Psychology*, 77(1), 65-78.

Frone, M. R., Russell, M., & Cooper, M. L. (1992b). Prevalence of work-family conflict: Are work and family boundaries asymmetrically permeable?. *Journal of Organizational Behaviour*, 13(7), 723-729.

Frone, M. R., Russell, M., & Barnes, G. M. (1996). Work-family conflict, gender, and health-related outcomes: A study of employed parents in two community samples. *Journal of Occupational Health Psychology*, 1(1), 57-69.

Frone, M. R., Russell, M., & Cooper, M. L. (1997). Relation of work-family conflict to health outcomes: A four-year longitudinal study of employed parents. *Journal of Occupational and Organizational Psychology*, 70(4), 325-336.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behaviour*, 50(2), 145–167.

Ford, M. T., Heinen, B. A., & Langkamer, K. L. (2007). Work and family satisfaction and conflict: A meta-analysis of cross-domain relations. *Journal of Applied Psychology*, 92(1), 57-80. doi:10.1037/0021-9010.92.1.57.

Graves, L. M., Ohlott, P. J., & Ruderman, M. N. (2007). Commitment to family roles: Effects on managers' attitudes and performance. *Journal of Applied Psychology*, 92(1), 44–56.

Greenhaus, J. H., & Sklarew, N. D. (1981). Some sources and consequences of career exploration. *Journal of Vocational Behaviour*, 18(1), 1-12.

Greenhaus, J., H. & Powell, G., N. (2006). When Work and Family Are Allies: A Theory of Work-Family Enrichment. *Academy of Management Review*, 31(1), 72–92.

Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5(1), 111-126.. doi:10.1037/10768998.5.1.111.

Grzywacz, J. G. (2002). Toward a theory of work–family enrichment. *Proceedings of the 34th Annual theory construction and research methodology workshop* (November), Houston, TX.

Grzywacz, J. G. & Bass, B. L. (2003). Work, Family, and Mental Health: Testing Different Models of Work-Family fit. *Journal of Marriage and Family*, 65(1), 248-261.

Grzywacz, J. G., & Butler, A. B. (2005). The impact of job characteristics on work-family facilitation: Testing a theory and distinguishing a construct. *Journal of Occupational Health Psychology*, 10(2), 97–109.

Grzywacz, J. G., & Carlson, D. S. (2007). Conceptualizing work-family balance: Implications for practice and research. *Advances in Developing Human Resources*, 9(4), 455-471. doi:10.1177/1523422307305487.

Halpern, D. F. (2005). Psychology at the intersection of work and family: Recommendations for employers, working families, and policymakers. *American Psychologist*, 60(5), 397–409.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, US: Guilford Press.

Hashim, R., & Ahmad, H. (2016). Family environment, sibling relationship and rivalry towards quality of life. *Environment-Behaviour Proceedings Journal*, 1(3), 113-122.

Henriques, C. S. (2017). *Melodia que dá ritmo às equipas? A Relação entre os Irmãos e o Funcionamento de Equipas: o papel mediador do Enriquecimento Família-Trabalho* (Master's thesis). Lisbon University, Lisbon. Retrived from <http://hdl.handle.net/10451/33581>.

Holman, D. J., & Wall, T. D. (2002). Work characteristics, learning-related outcomes, and strain: A test of competing direct effects, mediated, and moderated models. *Journal of Occupational Health Psychology*, 7(4), 283–301.

Howes, J. C., Cropanzano, R., Grandey, A. A., & Mohler, C. J. (2000). Who is supporting whom?. *Journal of Quality Management*, 5(2), 207-223.

Hunt, S.D., & Morgan, R.M. (1994). Organisational commitment: One of many commitments or key mediating construct? *Academy of Management Journal*, 37(6), 1568- 1587.

Hunter, E. M., Perry, S. J., Carlson, D. S., & Smith, S. A. (2010). Linking team resources to work–family enrichment and satisfaction. *Journal of Vocational Behaviour*, 77(2), 304-312. doi:10.1016/j.jvb.2010.05.009.

INE (2011). Censos 2011. Lisboa: Instituto Nacional de Estatística.

INE (2014). Inquérito à fecundidade 2013. Lisboa: Instituto Nacional de Estatística.

Jensen, A. C., Pond, A. M., & Padilla-Walker, L. M. (2015). Why can't I be more like my brother? The role and correlates of sibling social comparison orientation. *Journal of Youth and Adolescence*, 44(11), 2067-2078. doi:10.1007/s10964-015-0327-8.

Jensen, A. C., Whiteman, S. D., & Fingerman, K. L. (2018). Can't live with or without them: Transitions and young adults' perceptions of sibling relationships. *Journal of Family Psychology*, 32(3), 385-395. doi:[10.1037/fam0000361](https://doi.org/10.1037/fam0000361).

Kirchmeyer, C. (1992). Nonwork-to-work spillover: A more balanced view of the experiences and coping of professional women and men. *Sex Roles*, 28(9-10), 531–552.

Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology (Vol. 12): Industrial and Organizational Psychology*, (pp. 333-375). New York: Wiley.

Kozlowski, S. W., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological science in the public interest*, 7(3), 77-124.

Lanthier, R. P., & Campbell, A. J. (2011). *Sibling relationships as opportunities for development and learning in adulthood*. In C. Hoare (Ed.), *The Oxford Handbook of Reciprocal Adult*

*Development and Learning* (2nd ed., pp. 381-395). Oxford: Oxford University Press.  
10.1093/oxfordhb/9780199736300.013.0094.

Lanthier, R. P., & Stocker, C. (1992). *The Adult Sibling Relationship Questionnaire*. Denver, CO: University of Denver.

Larson, R. W., Wilson, S., Brown, B. B., Furstenberg, J. F., & Verma, S. (2002). Changes in Adolescents' Interpersonal Experiences: Are They Being Prepared for Adult Relationships in the Twenty-First Century?. *Journal of Research on Adolescence*, 12(1), 31-68.

Lee, T. R., Mancini, J. A., & Maxwell, J. W. (1990). Sibling relationship in adulthood: Contact patterns and motivations. *Journal of Marriage and the Family*, 52(2), 431-440.

Lee, B., Padilla, J., & McHale, S. M. (2015). Transmission of work ethic in African-American families and its links with adolescent adjustment. *Journal of Youth and Adolescence*, 45(11), 2278-2291. doi:10.1007/s10964-015-0391-0.

Leavy, R. L. (1983). Social support and psychological disorder: A review. *Journal of Community Psychology*, 11(1), 3-21.

Locke, E. A. (1982). The ideas of Frederick W. Taylor: an evaluation. *Academy of Management Review*, 7(1), 14-24.

Mathieu, J.E. and Zajac, D.M. (1990). A review and meta-analysis of the antecedents, correlates and consequences of organizational commitment. *Psychological Bulletin*, 108(2), 171-94.

Mathieu, J.E., Gilson, L.L. and Ruddy, T.M. (2006) Empowerment and team effectiveness: An empirical test of an integrated model. *Journal of Applied Psychology*, 91(1), 97-108.



Mathieu, J. E., Tannenbaum, S. I., Donsbach, J. S., & Alliger, G. M. (2014). A review and integration of team composition models: Moving toward a dynamic and temporal framework. *Journal of Management*, 40(1). doi:130-160. doi: [10.1177/0149206313503014](https://doi.org/10.1177/0149206313503014).

Matias., M., & Fontaine, A. M. (2012). A Conciliação de Papéis Profissionais e Familiares: O Mecanismo Psicológico de *Spillover*. *Psicologia: Teoria e Pesquisa*, 28(2), 235-243.

Mascha, E. J., Dalton, J. E., Kurz, A., & Saager, L. (2013). Understanding the mechanism: Mediation analysis in randomized and nonrandomized studies. *Anesthesia and Analgesia*, 117(4), 980-994. DOI: 10.1213/ANE.0b013e3182a44cb9.

McHale, S. M., Crouter, A. C., McGuire, S. A., & Updegraff, K. A. (1995). Congruence between mothers' and fathers' differential treatment of siblings: links with family relations and children's well-being. *Child Development*, 66(1), 116-128.

McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A Meta-analytic Review of the consequences associated with work-family enrichment. *Journal of Business and Psychology*, 25(3), 381-396.

McNall, L. A., Masuda, A. D., & Nicklin, J. M. (2010). Flexible Work Arrangements, Job Satisfaction, and Turnover Intentions: The Mediating Role of Work-to-Family Enrichment. *The Journal of Psychology Interdisciplinary and Applied*, 144(1), 61-81.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-98.

Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, 11(3), 299-326.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.

Meyer, J. P., Becker, T. E., & Van den Berghe, C. (2004). Employee Commitment and motivation: A conceptual analysis and integrative model. *Journal of Applied Psychology*, 89(6), 991-1007.

Meyer, J. P., Stanley, J. D., Herscovitch, L., & Topolnytsky, L. (2002). Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences. *Journal of Vocational Behaviour*, 61(1), 20-52.

Milevsky, A. (2005). Compensatory patterns of sibling support in emerging adulthood: Variations in loneliness, self-esteem, depression and life satisfaction. *Journal of Social and Personal Relationships*, 22(6), 743–755. doi:10.1177/0265407505056447.

Milevsky, A., Smoot, K., Leh, M., & Ruppe, A. (2005). Familial and contextual variables and the nature of sibling relationships in emerging adulthood. *Marriage & Family Review*, 37(4), 123-141. Doi:10.1300/J002v37n04\_07.

Minuchin, S. (1982). *Famílias: funcionamento e tratamento* (Eds). Porto Alegre: Artes Médicas.

Monday, R. T. (1998). Reflections on the study and relevance of organizational commitment. *Human Resource Management Review*, 8(4), 387-401.

Monday, R. T., Steers, R. M. and Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behaviour*, 14(2), 224-47.

Morf, M. (1989). *The work /life dichotomy: Prospects for reintegrating people and jobs*. New York: Quorum.

Mota, C. P., Serra, L., Relva, I., & Fernandes, O. M. (2017). Do sibling relationships protect adolescents in residential care and traditional families from developing psychopathologies?. *Journal of Family Studies*, 23(3), 260-277. doi:10.1080/13229400.2015.1106333.

Myers, S. A., & Bryant, L. E. (2008). The use of behavioural indicators of sibling commitment among emerging adults. *Journal of Family Communication*, 8(2), 101-125.

Nascimento, J. L., Lopes, A., & Salgueiro, M. F. (2008). Estudo sobre a validação do “Modelo de Comportamento Organizacional” de Meyer e 200 para o contexto português. *Comportamento Organizacional e Gestão*, 14(1), 115-133.

Novak, J., & Cañas, A. (2008). The Theory Underlying Concept Maps and How to Construct Them: Technical Report IHMC CmapTools 2006-01 Rev 01-2008, Florida Institute for Human and Machine Cognition. [Consultado em <http://cmap.ihmc.us/Publications/ResearchPapers/TheoryUnderlyingConceptMaps.pdf>.

Nunnally, J. C. (1978). *Psychometric theory* (2<sup>nd</sup> ed.). New York, NY: McGraw–Hill.

Odle-Dusseau, H. N., Britt, T. W., & Greene-Shortridge, T. M. (2012). Organizational work-family resources as predictors of job performance and attitudes: The process of work-family conflict and enrichment. *Journal of Occupational Health Psychology*, 17(1), 28-40.

Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviour. *Personnel Psychology*, 48(4), 775-802.

Padilla-Walker, L. M., Harper, J. M., & Jensen, A. C. (2010). Self-regulation as a mediator between sibling relationship quality and early adolescents' positive and negative outcomes. *Journal of Family Psychology*, 24(4), 419-428. doi:10.1037/a0020387.

Paul, A. K., & Anantharaman, R. N. (2003). Impact of people management practices on organizational performance: analysis of a causal model. *International Journal of Human Resource Management*, 14(7), 1246–1266.

Perista, H., Cardoso, A., Brázia, A., Abrantes, M., Perista, P., & Quintal, E. (2016). Os usos do tempo de homens e de mulheres em Portugal. *Policy Brief*, Lisboa,:CESIS e CITE. Disponível em [http://cite.gov.pt/pt/destaques/complementosDestqs2/INUT\\_brochura.pdf](http://cite.gov.pt/pt/destaques/complementosDestqs2/INUT_brochura.pdf).

Pinto, I. C. V. (2013). O papel moderador do género na relação entre Enriquecimento Família-Trabalho e Compromisso Afetivo (unpublished master's thesis). Lisbon University, Lisbon. Retrieved from <http://hdl.handle.net/10451/9496>.

Ponti, L., & Smorti, M. (2018). The roles of parental attachment and sibling relationships on life satisfaction in emerging adults. *Journal of Social and Personal Relationships*, 20(2): 1–17. doi: [10.1177/0265407518771741](https://doi.org/10.1177/0265407518771741).

Poole, M. S., & Hirokawa, R. Y. (1996). Introduction: Communication and group decision making. In R.Y. Hirokawa, & M.S. Poole (Eds.), *Communication in group decision-making* (pp. 3-18). Thousand Oaks, CA: Sage.

Portner, L., & Riggs, S. (2016). Sibling Relationships in Emerging Adulthood: Associations with Parent-Child Relationship. *Journal of Child & Family Studies*, 25(6), 1755-1764.

Powell, G., & Greenhaus, J. (2006) Is the opposite of positive negative? Untangling the complex relationship between work-family enrichment and conflict. *Career Development International*, 11(7), 650-659.

Punch, K. F. (2014). *Introduction to Social Research: Quantitative and qualitative approaches* (3<sup>rd</sup> ed). London: SAGE.

Relvas, A. P (1996). *O ciclo vital da família: Perspectiva sistémica*. Porto: Edições Afrontamento.

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology*, 87(4), 698-714.

Ribeiro, M. T., & Pimenta (2014). Chapter 1: Trabalho família uma questão de equilíbrio. In M. J., Chambel, & Ribeiro, M. (2014). *A Relação entre o Trabalho e a Família*. Lisboa: RH Editora.

Richter, A. W., Dawson, J. F., & West, M. (2011). The effectiveness of teams in organizations: a meta-analysis. *The International Journal of Human Resource Management*, 22(13), 2749-2769. ISSN 0958-5192. doi: [10.1080/09585192.2011.573971](https://doi.org/10.1080/09585192.2011.573971).

Riggio, H. R. (2000). Measuring attitudes toward adult sibling relationships: The lifespan sibling relationship scale. *Journal of Social and Personal Relationships*, 17(6), 707–728. doi:10.1177/0265407500176001.

Rickett, M. (2008). The causal relation between job attitudes and performance: a meta-analysis of panel studies. *Journal of Applied Psychology*, 93(2), 472-81.

Rosen, M. A., DiazGranados, D., Dietz, A. S., Benishek, L. E., Thompson, D., Pronovost, P. J., & Weaver, S. J. (2018). Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*, 73(4), 433-450. doi: [10.1037/amp0000298](https://doi.org/10.1037/amp0000298).

Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, 46(4), 655–684.

Ruderman, M. N., Ohlott, P. J., Panzer, K., & King, S. N. (2002). Benefits of multiple roles for managerial women. *Academy of Management Journal*, 45(2), 369–386.

Seligman, M. E. P. 2002. *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.

Sieber, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review*, 39(4), 567–578.

Siu, O. L., Lu, J. F., Brough, B., Lu, C. Q., Bakker, A. B., et al. (2010). Role resources and work-family enrichment: The role of work engagement. *Journal of Vocational Behavior*, 77(3), 470–480. doi:10.1016/j.jvb.2010.06.007.

Somech, A., Desivilya, H. S., & Lidogoster, H. (2009). Team conflict management and team effectiveness: the effects of task interdependence and team identification. *Journal of Organizational Behaviour*, 30(3), 359-378.

Spitze, G., & Trent, K. (2006). Gender differences in adult sibling relations in two-child families. *Journal of Marriage and Family*, 68(4), 977-992.

Spitze, G. D., Trent, K. (2016). Changes in Individual Sibling Relationships in Response to Life Events. *Journal of Family Issues*. 39(2), 503-526. doi: 10.1177/0192513X16653431.

Steelman, L. C., Powell, B., Werum, R., & Carter, S. (2002). Reconsidering the Effects of Sibling Configuration: Recent Advances and Challenges. *Annual Review of Sociology* 28, 243-269.

Stewart, R., B., Verbruge, K., M., & Beilfuss, M., C. (1998). Sibling relationship in early adulthood: A typology. *Personal Relationships*, 5(1), 59-74.

Stocker, C. M., Lanthier, R. P., & Furman, W. (1997). Sibling relationship in early adulthood. *Journal of Family Psychology*, 11(2), 210-221.

Sundstrom, E., DeMeuse, K. P., & Futrell, D. (1990). Work teams: Applications and effectiveness. *American Psychologist*, 45(2), 120-133.

Swift, T. A., & West, M. A. (1998). *Reflexivity and group processes: Research and practice*. The ESCR Centre for Organization and Innovation, Institute of Work Psychology, University of Sheffield, Sheffield, UK.

Tang, S., Siu, O., & Cheung, F. (2012). A Study of Work–Family Enrichment among Chinese Employees: The Mediating Role between Work Support and Job Satisfaction. *Journal of Applied Psychology*, 63(1), 130-150.

Tata, J. & Prasad, S. (2004). Team self-management, organizational structure, and judgments of team effectiveness. *Journal of Managerial Issues*, 16(2), 248–265.

Torres, A. (2004). Vida conjugal e trabalho: uma perspectiva sociológica. [Marital and professional lives: a sociological perspective]. Oeiras, Portugal: Celta Editora.

Torres, S., Ramos, D., & Neves A., L. (2016). Organização do trabalho e do tempo de trabalho. *Módulo ad hoc de 2015 do Inquérito ao Emprego*. Lisboa: INE.

Tucker, C. J., Holt, M., & Wiesen-Martin, D. (2013). Inter-parental conflict and sibling warmth during adolescence: Associations with female depression in emerging adulthood. *Psychological Reports*, 112(1), 243-251. doi:10.2466/21.10.PR0.112.1.243-251.

van Knippenburg, D., & Schippers, M. C. (2007). Work group diversity. *Annual Review of Psychology*, 58, 515–541.

Vieira, J. M., Lopez, F. G., & Matos, P. M. (2014). Further validation of Work–Family Conflict and Work–Family Enrichment Scales among Portuguese working parents. *Journal Of Career Assessment*, 22(2), 329-344. doi:10.1177/1069072713493987.

Volling, B. L. (2003). Sibling relationships. In M. H. Bornstein, L. Davidson, C. L. M. Keyes, & K. A. Moorethe (Eds.), *Well-being: Positive development across the life course* (pp. 383–406). Mahwah, NJ: Erlbaum.

Voydanoff, P. (2002). Linkages Between the Work-family Interface and Work, Family, and Individual Outcomes: An Integrative Model. *Journal of Family Issues*, 23(1),138-164, 10.1177/0192513X02023001007.

Voydanoff, P. (2005). Toward a conceptualization of perceived work–family fit and balance: A demands and resources approach. *Journal of Marriage and Family*, 67(4), 822–36.

Waldegrave, C. (2009). Cultural, Gender, and Socioeconomic Contexts in Therapeutic and Social Policy Work. *Family Process*, 48(1), 85-101.

Wall, K. (2007). Atitudes face à divisão familiar do trabalho em Portugal e na Europa. In K. Wall, & L. Amâncio (Eds), *Família e género, atitudes socais dos Portugueses* (pp. 211-257), Lisboa: Imprensa de Ciências Socais.

Walker, A., Allen, K., & Connidis, I. (2005). Theorizing and studying sibling ties in adulthood. In V. Bengtson, A. Acock, K. Allen, P. Dilworth-Anderson, & D. Klein (Eds.), *Sourcebook of family theory & research* (pp. 167-190). Thousand Oaks, CA: Sage.

Waite, E. B., Shanahan, L., Calkins, S. D., Keane, S. P., & O'Brien, M. O. (2011). Life events, sibling warmth, and youth's adjustment. *Journal of Marriage and Family*, 73(5), 902–912. doi:10.1111/j.1741-3737.2011.00857.x.

Wayne, J. H., Randel, A. E., & Stevens, J. (2006). The role of identity and work-family support in work-family enrichment and its work-related consequences. *Journal of Vocational Behaviour*, 69(3), 445-461.

Wayne, J. H., Grzywacz, J. G., Carlson, D. S., & Kacmar, K. M. (2007). Work-family facilitation: A theoretical explanation and model of primary antecedents and consequences. *Human Resource Management Review*, 17(1), 63-76.



West, M. A. (1996). Reflexivity and work group effectiveness: A conceptual integration. In M.A. West (Ed.), *Handbook of work group psychology* (pp. 555- 579). Chichester, UK: John Wiley & Sons.

West, M., A. (2012a). Team Effectiveness. In M. A. West (Ed.), *Effective Teamwork: Practical Lessons from Organisational Research* (pp. 3-12). UK: John Wiley & Sons.

West, M., A. (2012b). Real Teams Work. In M. A. West (Ed.), *Effective Teamwork: Practical Lessons from Organisational Research* (pp. 12-38). UK: John Wiley & Sons.

West, M. A., & Markiewicz, L. (2004). Building team-based working: *A practical guide to organizational transformation*. West Sussex, UK: Oxford: BPS Blackwell.

West, M. A., Borril, C.S., Dawson, J., Scully, J., Carter, M., Anelay, S., Patterson, M.G., & Waring, J. (2002). The link between the management of employees and patient mortality in acute hospitals. *International Journal of Human Resource Management*, 13(2), 1299-1310.

White, L. (2001). Sibling relationships over the life course: A panel analysis. *Journal of Marriage and Family*, 63(2), 555-568.

White, L. K., & Riedmann, A. (1992). Ties among adult siblings. *Social Forces*, 71(1), 85- 102.

Zaleska, M. (1998). Individual and group choices among solutions of problem when solution verifiability is low. *European Journal of Social Psychology*, 8(1), 37-53.

Zedeck, S. (Ed.) (1992). *Frontiers of industrial and organizational psychology, Vol. 5; The Jossey-Bass management series and The Jossey-Bass social and behavioural science series. Work, families, and organizations*. San Francisco, CA, US: Jossey-Bass.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths About Mediation Analysis. *Journal of Consumer Research*, 37(2), 197-206. DOI: 10.1086/651257.

# APPENDIXES

---

# **APPENDIX A**

---

## **Applied Sociodemographic Questionnaire and Scales**

## **Appendix A. Applied Sociodemographic Questionnaire and Scales**

### **Informação ao participante e consentimento informado**

O presente estudo, para o qual pedimos a sua colaboração, decorre no âmbito de um projeto de investigação da mestranda Beatriz de Araújo Vitória, em Psicologia Clínica, orientada pela Professora Doutora Maria Teresa Ribeiro, da Faculdade de Psicologia da Universidade de Lisboa, com a finalidade de estudar a relação existente entre a família e o trabalho. Pretende-se perceber em que medida a vivência familiar dos trabalhadores contribui para o desenvolvimento de competências importantes para as organizações.

Esta investigação é direcionada para trabalhadores inseridos em médias e pequenas empresas.

A sua colaboração, enquanto participante deste estudo, deve ter um carácter voluntário, e a decisão de não participar não tem qualquer consequência, podendo desistir a qualquer momento, se assim o desejar. A sua participação consiste em responder a um conjunto de questionários que permitirá o avanço do nosso estudo. Estima-se que demore cerca de 15 minutos.

Garantimos o anonimato de toda a informação recolhida, não sendo registados dados que o possam identificar.

Os resultados do presente estudo, serão divulgados à Direção de Recursos Humanos da sua empresa. Poderá esclarecer qualquer dúvida e/ou obter informações sobre a investigação através do endereço de email: [beatriz.vitoria@live.com](mailto:beatriz.vitoria@live.com).

Obrigada desde já pela sua colaboração!

### **1. Questionário Sociodemográfico**

*Para melhor relacionar os dados recolhidos, é importante obter algumas informações sobre os participantes. Assim, solicita-se que preencha este questionário.*

Sexo: Feminino \_\_\_\_ Masculino \_\_\_\_ Idade \_\_\_\_ Estado Civil

\_\_\_\_\_

Desde que ano trabalha nesta empresa? \_\_\_\_\_ Nível de escolaridade

\_\_\_\_\_

Nº Irmãos \_\_\_\_ Sexo \_\_\_\_\_

---

Sou o irmão... Mais velho \_\_\_\_ Do meio \_\_\_\_ Mais novo \_\_\_\_ Gémeo \_\_\_\_  
Outro \_\_\_\_\_

## 2. Questionário da relação de irmãos adultos

I. Considerando a seguinte escala, responda às perguntas abaixo:

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Nunca	Raramente	Algumas vezes	Muitas vezes	Frequentemente, quase sempre

- a) Pensando nos seus tempos de juventude e na relação que tinha com o (s) seu (s) irmão(s) indique a frequência de contacto com ele (s): \_\_\_\_\_
- b) Atualmente e pensando na relação que tem com o (s) seu (s) irmão(s) indique a frequência de contacto com ele (s): \_\_\_\_\_

II. Considerando a seguinte escala, responda às perguntas abaixo:

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Muito má	Má	Nem boa, nem má	Boa	Muito boa

- c) Se tivesse de classificar como era a relação, nos seus tempos de juventude, com o(s) seu(s) irmão(s), classificá-la-ia sendo \_\_\_\_\_
- d) Pensando na atual relação que tem com o(s) seu(s) irmão(s), classificá-la-ia como sendo \_\_\_\_\_

III. No presente questionário, indicam-se diferentes modos de as pessoas perceberem as relações com os irmãos. Pedimos-lhe que pense na relação que tem com um dos seus irmãos, pensando em si, mas também naquilo que ele/ela pensa sobre a vossa relação.

- e) Indique também o sexo do irmão a que se refere: \_\_\_\_\_

Responda a cada questão, tendo em conta as cinco alternativas que se seguem e assinalando com um círculo a sua opção:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Pouco		Nem muito, nem pouco		Muito

1. Em que medida tem assuntos em comum com a/o sua/seu irmã/o?	1	2	3	4	5
2. Em que medida costuma falar com a/o sua/seu irmã/o sobre assuntos que são importantes para si?	1	2	3	4	5
3. Em que medida você e a/o sua/seu irmã/o costumam discutir?	1	2	3	4	5
4. Em que medida considera a/o sua/seu irmã/o um/a bom/boa amigo/amiga?	1	2	3	4	5
5. Em que medida irrita a/o sua/seu irmã/o?	1	2	3	4	5
6. Em que medida admira o seu irmão?	1	2	3	4	5
7. Em que medida tenta animar a/o sua/seu irmã/o quando ela/ele se sente em baixo	1	2	3	4	5
8. Em que medida é competitivo com a/o sua/seu irmã/o?	1	2	3	4	5
9. Em que medida pede à/ao sua/seu irmã/o ajuda para resolver problemas não pessoais?	1	2	3	4	5
10. Em que medida exerce poder sobre a/o sua/seu irmã/o?	1	2	3	4	5
11. Em que medida aceita a personalidade da/do sua/seu irmã/o?	1	2	3	4	5
12. Em que medida conhece a/o sua/seu irmã/o?	1	2	3	4	5
13. Em que medida a sua personalidade e a personalidade da/do sua/seu irmã/o são semelhantes?	1	2	3	4	5
14. Em que medida discute os seus sentimentos ou assuntos pessoais com a/o sua/seu irmã/o?	1	2	3	4	5
15. Em que medida crítica a/o sua/seu irmã/o?	1	2	3	4	5
16. Em que medida você se sente íntimo da/do sua/seu irmã/o?	1	2	3	4	5
17. Em que medida a/o sua/seu irmã/o faz coisas que o/a deixam furioso/a?	1	2	3	4	5
18. Em que medida pensa que a/o sua/seu irmã/o realizou algo importante na vida?	1	2	3	4	5
19. Em que medida pode contar com o apoio da/do sua/seu irmã/o quando se sente <i>stressado/a</i> ?	1	2	3	4	5
20. Em que medida sente ciúmes da/do sua/seu irmã/o?	1	2	3	4	5
21. Em que medida você dá conselhos práticos à/ao sua/seu irmã/o (ex. compra de casa ou carro...)	1	2	3	4	5
22. Em que medida é autoritário com a/o sua/seu irmã/o?	1	2	3	4	5
23. Em que medida aceita o estilo de vida da/do sua/seu irmã/o?	1	2	3	4	5
24. Em que medida conhece as relações de amizade da/do sua/seu irmã/o?	1	2	3	4	5
25. Em que medida você e a/o sua/seu irmã/o pensam de forma semelhante?	1	2	3	4	5
26. Em que medida entende realmente a/o sua/seu irmã/o?	1	2	3	4	5
27. Em que medida discorda com a/o sua/seu irmã/o sobre assuntos diversos?	1	2	3	4	5

28. Em que medida deixa que a/o sua/seu irmã/o saiba que você se preocupa com ela/ele?	1	2	3	4	5
29. Em que medida inferioriza a/o sua/seu irmã/o?	1	2	3	4	5
30. Em que medida se sente orgulhoso/a da/do sua/seu irmã/o?	1	2	3	4	5
31. Em que medida discute decisões pessoais importantes com a/o sua/seu irmã/o?	1	2	3	4	5
32. Em que medida tenta ser mais competente que a/o sua/seu irmã/o?	1	2	3	4	5
33. Em que medida você ajudaria a/o sua/seu irmã/o financeiramente, caso ela/ele necessitasse?	1	2	3	4	5
34. Em que medida age com superioridade com a/o sua/seu irmã/o?	1	2	3	4	5
35. Em que medida você aceita as ideias da/do sua/seu irmã/o?	1	2	3	4	5
36. Em que medida conhece as ideias da/do sua/seu irmã/o?	1	2	3	4	5
37. Em que medida você e a/o sua/seu irmã/o tem estilos de vida semelhantes?	1	2	3	4	5
38. Se assim entender, deixe um comentário					

---



---



---



---

### 3. Questionário do enriquecimento família trabalho

Relativamente à conciliação de papéis e responsabilidades nos domínios do Trabalho e da Família, leia cada uma das afirmações seguintes e assinale a resposta que melhor a caracteriza, de acordo com as alternativas que se seguem:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Discordo fortemente	Discordo	Nem concordo, nem discordo	Concordo	Concordo fortemente

Note que para concordar com um item deverá concordar com a totalidade da afirmação. Vejamos um exemplo:

*“O meu envolvimento no meu trabalho ajuda-me a compreender diferentes pontos de vista e isso ajuda-me a ser melhor na minha família”.*

Para concordar fortemente, teria de concordar que:

- o seu envolvimento no trabalho ajuda-o a compreender diferentes pontos de vista
- +
- estes diferentes pontos de vista o ajudam a ser melhor na sua família.

O meu envolvimento na minha família...

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Ajuda-me a desenvolver conhecimento e isso ajuda-me a ser um melhor trabalhador                         | 1 | 2 | 3 | 4 | 5 |
| 2. Ajuda-me a adquirir competências e isso ajuda-me a ser um melhor trabalhador                            | 1 | 2 | 3 | 4 | 5 |
| 3. Ajuda-me a alargar os meus conhecimentos sobre novas coisas e isso ajuda-me a ser um melhor trabalhador | 1 | 2 | 3 | 4 | 5 |
| 4. Deixa-me de bom humor e isso ajuda-me a ser um melhor trabalhador                                       | 1 | 2 | 3 | 4 | 5 |
| 5. Deixa-me contente e isso ajuda-me a ser um melhor trabalhador   | 1 | 2 | 3 | 4 | 5 |
| 6. Dá-me alegria e isso ajuda-me a ser um melhor trabalhador   | 1 | 2 | 3 | 4 | 5 |
| 7. Faz com que evite desperdiçar tempo no trabalho e isso ajuda-me a ser um melhor trabalhador             | 1 | 2 | 3 | 4 | 5 |
| 8. Incentiva-me a rentabilizar o meu horário de trabalho e isso ajuda-me a ser um melhor trabalhador       | 1 | 2 | 3 | 4 | 5 |
| 9. Faz com que esteja mais concentrado no trabalho e isso ajuda-me a ser um melhor trabalhador             | 1 | 2 | 3 | 4 | 5 |

#### 4. Questionário do funcionamento de equipa

Indique em que medida cada uma destas frases pode corresponder a uma boa descrição do funcionamento da sua equipa, em função da seguinte escala: .

1	2	3	4	5
Muito	Inapropriada	Nem	Apropriada	Muito
inapropriada		apropriada, nem		apropriada
		desapropriada		

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. A equipa revê os seus objetivos   | 1 | 2 | 3 | 4 | 5 |
| 2. Nós discutimos regularmente em que medida a equipa está a trabalhar eficazmente                   | 1 | 2 | 3 | 4 | 5 |
| 3. Os métodos que a equipa usa para realizar o seu trabalho, são muitas vezes discutidos             | 1 | 2 | 3 | 4 | 5 |
| 4. Nesta equipa mudamos os objetivos, quando se mudam as circunstâncias                              | 1 | 2 | 3 | 4 | 5 |
| 5. As estratégias da equipa são raramente modificadas  | 1 | 2 | 3 | 4 | 5 |
| 6. Discutimos muitas vezes em que medida está a ser eficiente a comunicação da informação, entre nós | 1 | 2 | 3 | 4 | 5 |
| 7. Revemos muitas vezes o modo como estamos a realizar o nosso trabalho                              | 1 | 2 | 3 | 4 | 5 |



- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 8. O modo como as decisões são tomadas pela equipa é raramente alterado               | 1 | 2 | 3 | 4 | 5 |
| 9. Os membros da equipa apoiam-se quando os tempos são difíceis                       | 1 | 2 | 3 | 4 | 5 |
| 10. Quando o trabalho é <i>stressante</i> a equipa não se apoia muito                 | 1 | 2 | 3 | 4 | 5 |
| 11. O conflito tende a perdurar nesta equipa  | 1 | 2 | 3 | 4 | 5 |
| 12. As pessoas desta equipa ensinam aos outros, novas competências                    | 1 | 2 | 3 | 4 | 5 |
| 13. Quando as coisas são <i>stressantes</i> nós enfrentamo-las juntos como uma equipa | 1 | 2 | 3 | 4 | 5 |
| 14. Os membros da equipa estão muitas vezes zangados                                  | 1 | 2 | 3 | 4 | 5 |
| 15. Os conflitos tendem a ser resolvidos construtivamente nesta equipa                | 1 | 2 | 3 | 4 | 5 |
| 16. As pessoas nesta equipa são lentas a resolver os conflitos                        | 1 | 2 | 3 | 4 | 5 |

## 5. Questionário do compromisso afetivo

Nesta secção pedimos-lhe que reflita sobre a sua ligação a esta empresa, com a qual tem o seu contrato de trabalho. Para cada uma delas, indique a sua opinião:

1	2	3	4	5	6	7
Discordo. Fortemente	Discordo	Nem concordo, nem discordo	Nem concordo, nem discordo	Concordo moderadamente	Concordo	Concordo totalmente

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1. Ficaria muito contente se desenvolvesse o resto da minha carreira nesta empresa | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. Eu sinto os problemas desta empresa como meus                                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Esta empresa tem um elevado significado pessoal para mim                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Eu não tenho um forte sentimento de pertencer a esta empresa                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. Eu não me sinto como “fazendo parte desta família” nesta empresa.               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. Eu não me sinto “ligado emocionalmente” a esta empresa                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Muito obrigada pela sua colaboração!

# **APPENDIX B**

---

## **Sample Characterisation**

## Appendix B. Sample Characterisation

**Output 1.** Descriptive Statistics of sociodemographic variables: age, gender, civil status, education level, enterprise size, tenure, sibship size, sibship order

Variables		Frequencies (Percentages)	Minimum	Maximum	Mean (Standard Deviation)
Age			22	75	44.56 (10.96)
Gender	Male	272 (60.4)			
	Female	178 (39.6)			
Civil Status	Single	81 (18)			
	Married	265 (58.9)			
	Registered Partnership	56 (12.4)			
	Separated	6 (1.3)			
	Divorce	35 (7.8)			
	Re-married	3 (0.7)			
	Widows	4 (0.9)			
Education Level	4 <sup>th</sup> Grade	3 (0.7)			
	6 <sup>th</sup> Grade	15 (3.3)			
	9 <sup>th</sup> Grade	8 (1.8)			
	High School	85 (18.9)			
	Technical- Professional System	25 (5.6)			
	Bachelor's degree pre- Bologna	17 (3.8)			

	Bachelor's degree post-Bologna	170 (37.8)			
	Master's degree	190 (24.2)			
	Doctoral Qualifications	1 (0.2)			
	Other	17 (3.8)			
Enterprise Size	Small	13 (2.9)			
	Medium	60 (13.3)			
	Large	377 (83.8)			
Tenure	<5 years	80 (17.8)	0	45	16.3 (11.26)
	5-9 years	79 (17.6)			
	10-14 years	64 (14.2)			
	15-19 years	69 (15.3)			
	20-24 years	45 (10)			
	25-29 years	40 (8.9)			
	≥30 years	73 (16.2)			
Sibship Size	2	165 (54.6)	2	12	2 (1.6)
	3	71 (23.5)			
	4	71 (8.6)			
	5	15 (5)			
	6	8 (2.6)			
	7	9 (3)			
	9	2 (0.7)			
	12	1 (0.3)			

Sibship Order	Older Sibling	123 (40.7)
	Middle Sibling	46 (15.2)
	Younger Sibling	113 (37.4)
	Twin Sibling	3 (1)
	Other Sibling	19 (6.3)

## **APPENDIX C**

---

### **Exploratory factorial analysis for Adult Sibling Relationship Questionnaire (ASRQ)**

**Appendix C.** Exploratory factorial analysis for Adult Sibling Relationship Questionnaire (ASRQ)

**Output 1.** Pattern and Structure Matrix for Exploratory factorial analysis with Oblimin rotation of two-factor solution with Kaiser normalisation method of the Adult Sibling Relationship Questionnaire (ASRQ)<sup>1</sup>

Explained Var 45.32%					
Items	Pattern Coefficients		Structure Coefficients		Communalities
	Component 1	Component 2	Component 1	Component 2	
16	.829		.828		.687
6	.802		.805		.664
2	.801		.798		.648
19	.794		.794		.632
26	.772		.774		.604
4	.765		.767		.593
30	.761		.764		.603
36	.747		.748		.559
14	.743		.738		.592
7	.738		.737		.544
1	.721		.717		.546
25	.706		.708		.504
31	.701		.696		.538
35	.692		.695		.518
28	.663		.660		.451
18	.654		.656		.436
24	.643		.642		.414
12	.640		.641		.412
11	.625		.632	-.308	.486
37	.607		.608		.371
33	.601		.605	-.307	.371
23	.598		.603		.451
21	.528		.524		.299
9	.488		.483		.271
13	.480		.480		.230
22		.722		.722	.522
5		.696		.696	.484
15		.654		.652	.415
20		.637		.638	.408
17		.623		.627	.417
10	.305	.604		.596	.449
3		.590		.591	.365

<b>34</b>	.589	.586	.360
<b>29</b>	.553	.553	.308
<b>8</b>	.505	.502	.268
<b>32</b>	.416	.416	.174
<b>27</b>	.358	.362	.158

---

<sup>1</sup> KMO=.92; Bartlett's test sig (p=0.00)



# **APPENDIX D**

---

## **Exploratory factorial analysis for Team Functioning Scale (FT)**

## Appendix D. Exploratory factorial analysis for Team Functioning Scale (TF)

**Output 1.** Pattern and Structure Matrix for Exploratory factorial analysis with Oblimin rotation of two-factor solution with Kaiser normalisation method of the Team Functioning Scale (TF)<sup>2</sup>

Explained Var 57.23%					
Items	Pattern Coefficients		Structure Coefficients		Communalities
	Component 1	Component 2	Component 1	Component 2	
11	.880		.813	.588	.668
14	.837		.808	.362	.628
10	.835		.807		.655
9	.729		.788	.318	.623
16	.702		.784	.473	.553
13	.692		.754	.543	.706
15	.644		.740	.427	.606
12	.552		.664	.500	.479
3		.792	.559	.859	.738
7		.776	.517	.852	.695
2		.773	.493	.829	.761
1		.710	.534	.800	.664
6		.705	.539	.798	.664
4		.607		.542	.306
5		.483		.498	.249
8		.432		.399	.162

<sup>2</sup> KMO=.93; Bartlett's test sig (p=0.00)

# **APPENDIX E**

---

## **Pearson Correlations among Latent and Control Variables**

## Appendix E. Pearson Correlations among Latent and Control Variables

**Output 1.** Latent and control variables Pearson correlations: *Positive Sibling Relationship, Negative Sibling Relationship, FWE, Social Reflexivity Level, Task Reflexivity Level and Affective Commitment, age, gender, sibship size and tenure*

	<i>r</i>									
	1	2	3	4	5	6	7	8	9	10
1.Positive SR. <sup>a</sup>										
2.Negative SR. <sup>b</sup>	-.03									
3. FWE <sup>c</sup>	.21**	-.07								
4.Social R. <sup>d</sup>	.17**	-.16**	.27**							
5.Task R. <sup>e</sup>	.14*	-.12*	.31**	.61**						
6.Affective C. <sup>f</sup>	.17**	-.03	.34**	.46**	.40**					
7. Age <sup>g</sup>	.06	-.03	-.12*	.15**	.15**	.32**				
8. Gender <sup>h</sup>	.06	.13*	-.01	-.16**	-.09	-.05	-.20**			
9.Sibship S. <sup>i</sup>	.20**	.06	-.01	0.6	.13*	.13*	.35**	-.06		
10. Tenure <sup>j</sup>	.01	-.06	-.09	-.16**	.18**	.34**	.81**	-.18**	.26**	

Note: \* $p < .05$ ; \*\* $p < .01$ ; <sup>a</sup> Positive Sibling Relationship; <sup>b</sup> Negative Sibling Relationship; <sup>c</sup> Family-to-Work Enrichment; <sup>d</sup> Team Functioning at the Social Reflexivity Level ; <sup>e</sup> Team Functioning at the Task Reflexivity Level; <sup>f</sup> Organisational Affective Commitment; <sup>g</sup> continuous numeric variable (age in years); <sup>h</sup> dummy variables (0=woman; 1=man); <sup>i</sup> continuous numeric variable (number of siblings in the sibship); <sup>j</sup> continuous numeric variable (number of years working for the company).

## APPENDIX F

---

**Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a positive sibling relationship (X) and social reflexivity (Y) (controlled for age, gender, tenure and sibship size)**

**Appendix F.** Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a positive sibling relationship (X) and social reflexivity (Y) (controlled for age, gender, tenure and sibship size)

**Output 1.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Positive Sibling Relationship as a FWE predictor (controlled for age, gender, tenure and sibship size)

N=301			
	FWE (M)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	3.78***	.29	[3.22, 4.35]
Positive Sibling Relationship (X)	.19***	.05	[.09, .29]
Gender	-.06	.08	[-.22, .10]
Age	-.01	.01	[-.02, .01]
Tenure	.01	.03	[-.05, .08]
Sibship size	-.01	.03	[-.05, .05]
R <sup>2</sup>	.06		
F-ratio	(5.00, 295.00) 3.84, p=.0022		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable

**Output 2.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Team Functioning at the Social Reflexivity Level as a FWE outcome (controlled for age, gender, tenure and sibship size)

N=301			
	Social Reflexivity (Y)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	2.30***	.37	[1.57, 3.02]
FWE (M)	.28***	.06	[.16, .39]
Gender	-.20*	.08	[-.36, -.04]
Age	.01	.01	[-.01, .02]
Tenure	.03	.03	[-.03, .10]
Sibship size	-.01	.03	[-.06, .04]
R <sup>2</sup>	.14		
F-ratio	(6.00, 294.00) 7.70, p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*:  $p < .05$ ; \*\*:  $p < .01$ ; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable; Y= dependent variable

**Output 3.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating the total effect of Positive Sibling Relationship on Team Functioning at the Social Reflexivity Level (controlled for age, gender, tenure and sibship size)

N=301			
Social Reflexivity (Y)			
	<i>B</i>	<i>SE</i>	95% CI
Constant	3.33***	.30	[2.73, 3.93]
Positive Sibling Relationship (X)	.18**	.07	[-.06, .27]
Gender	-.22*	.08	[-.38, .05]
Age	.01	.01	[-.01, .02]
Tenure	.03	.04	[-.03, .10]
Sibship size	-.01	.04	[-.07, .05]
R <sup>2</sup>	.07		
F-ratio	(5.00, 295.00) 4.68 p=.0004		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; \*\*:  $p < .01$ ; \*:  $p < .05$ ; X= independent variable; Y= dependent variable

**Output 4.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating direct and indirect effects of a Positive Sibling Relationship on Team Functioning at the Social Reflexivity (controlling FWE)

N=301			
Positive Sibling Relationship on Social Reflexivity (controlling <i>FWE</i> )			
	<i>Effect</i>	<i>SE</i>	95% CI
Direct Effect	.12	.05	[-.01, .23]
Indirect Effect	.05	.02	[-.01, .10]

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero.

## APPENDIX G

---

**Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a positive sibling relationship (X) and task reflexivity (Y) (controlled for age, gender, tenure and sibship size)**



**Appendix G.** Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a positive sibling relationship (X) and task reflexivity (Y) (controlled for age, gender, tenure and sibship size)

**Output 1.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) Positive Sibling Relationship as a FWE predictor (controlled for age, gender, tenure and sibship size)

N=301			
	FWE (M)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	3.78***	.29	[3.22, 4.35]
Positive Sibling Relationship (X)	.19***	.05	[-.09, .29]
Gender	-.06	.08	[-.22, .10]
Age	-.01	.01	[-.02, .01]
Tenure	.01	.03	[-.05, .08]
Sibship size	-.01	.03	[-.05, .05]
R <sup>2</sup>	.06		
F-ratio	(5.00, 295.00) 3.84, p=.0022		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable

**Output 2.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Team functioning at the Task Reflexivity Level as a FWE outcome (controlled for gender, age, tenure and sibship size)

N=301			
	Task Reflexivity (Y)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	1.72***	.39	[-.96, 2.48]
FWE (M)	.35***	.06	[-.23, .47]
Gender	-.08	.08	[-.25, .09]
Age	.01	.01	[-.01, .01]
Tenure	.06	.04	[-.01, .14]
Sibship size	.41	.03	[-.02, .09]
R <sup>2</sup>	.15		
F-ratio	(6.00, 294.00) 8.82, p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable; Y= dependent variable

**Output 3.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating total effect of a Positive Sibling Relationship on Team Functioning at the Task Reflexivity Level (controlled for age, gender, tenure and sibship size)

N=301			
Task Reflexivity (Y)			
	<i>B</i>	<i>SE</i>	95% CI
Constant	3.04***	.32	[2.41, 3.67]
Positive Sibling Relationship (X)	.13*	.06	[.02, .25]
Gender	-.10	.09	[-.28, .08]
Age	-.01	.01	[-.02, .01]
Tenure	.07	.04	[-.01, .14]
Sibship size	.03	.03	[-.02, .10]
R <sup>2</sup>	.06		
F-ratio	(5.00, 295.00) 3.82 p=.0023		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; \*\*:  $p < .01$ ; \*:  $p < .05$ ; X= independent variable; Y= dependent variable

**Output 4.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating direct and indirect effects of a Positive Sibling Relationship on Team Functioning at the Task Reflexivity (controlling FWE)

N=301			
Positive Sibling Relationship on Task Reflexivity (controlling FWE)			
	<i>Effect</i>	<i>SE</i>	95% CI
Direct Effect	.07	.06	[.01, .23]
Indirect Effect	.07	.02	[.01, .10]

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero.

## APPENDIX H

---

**Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a positive sibling relationship (X) and affective commitment (Y) (controlled for age, gender, tenure and sibship size)**

**Appendix H.** Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a positive sibling relationship (X) and affective commitment (Y) (controlled for age, gender, tenure and sibship size)

**Output 1.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Positive Sibling Relationship as a FWE predictor (controlled for age, gender, tenure and sibship size)

N=301			
	FWE (M)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	3.78***	.29	[3.22, 4.35]
Positive Sibling Relationship (X)	.19***	.05	[-.09, .29]
Gender	-.06	.08	[-.22, .10]
Age	-.01	.01	[-.02, .01]
Tenure	.01	.03	[-.05, .08]
Sibship size	-.01	.03	[-.05, .05]
R <sup>2</sup>	.06		
F-ratio	(5.00, 295.00) 3.84, p=.0022		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable

**Output 2.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Affective Commitment as a FWE outcome (controlled for age, gender, tenure and sibship size)

N=301			
	Affective Commitment (Y)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	2.48***	.43	[1.64, 3.26]
FWE (M)	.49***	.69	[-.16, .22]
Gender	.03	.09	[-.01, .03]
Age	-.01	.01	[-.04, .19]
Tenure	.11**	.04	[-.06, .06]
Sibship size	.01	.03	[-.36, .63]
R <sup>2</sup>	.28		
F-ratio	(6.00, 294.00) 18.81, p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*:  $p < .01$ ; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable; Y= dependent variable

**Output 3.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating the total effect of Positive Sibling Relationship on Affective Commitment (controlled for age, gender, tenure and sibship size)

N=301			
Affective Commitment (Y)			
	<i>B</i>	<i>SE</i>	95% CI
Constant	4.35***	.37	[3.63, 5.01]
Positive Sibling Relationship (X)	.19**	.07	[-.06, .32]
Gender	.01	.10	[-.20, .02]
Age	.01	.01	[-.01, .02]
Tenure	.12*	.04	[-.04, .20]
Sibship size	.01	.04	[-.07, .07]
R <sup>2</sup>	.15		
F-ratio	(5.00, 295.00) 10.46 p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; \*\*:  $p < .01$ ; \*:  $p < .05$ ; X= independent variable; Y= dependent variable

**Output 4.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating direct and indirect effects of a Positive Sibling Relationship on Affective Commitment (controlling FWE)

N=301			
Positive Sibling Relationship on Affective Commitment (controlling FWE)			
	<i>Effect</i>	<i>SE</i>	95% CI
Direct Effect	.09	.06	[-.03, .22]
Indirect Effect	.10	.04	[-.03, .18]

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero.

## APPENDIX I

---

**Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a negative sibling relationship (X) and social reflexivity (Y) (controlled for age, gender, tenure and sibship size)**

**Appendix I.** Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a negative sibling relationship (X) and social reflexivity (Y) (controlled for age, gender, tenure and sibship size)

**Output 1.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Negative Sibling Relationship as a FWE predictor (controlled for age, gender, tenure and sibship size)

N=301			
	FWE (M)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	4.51***	.26	[3.99, 5.03]
Negative Sibling Relationship (X)	-.08	.07	[-.22, .05]
Gender	-.03	.08	[-.19, .14]
Age	-.01	.01	[-.02, .01]
Tenure	.00	.03	[-.06, .07]
Sibship size	.02	.03	[-.04, .07]
R <sup>2</sup>	.02		
F-ratio	(5.00, 295.00) 1.26, p=.28		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable

**Output 2.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Team Functioning at the Social Reflexivity Level as a FWE outcome (controlled for age, gender, tenure and sibship size)

N=301			
	Social Reflexivity (Y)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	2.78***	.37	[2.05, 3.52]
FWE (M)	.29***	.06	[.18, .41]
Gender	-.17*	.08	[-.33, -.01]
Age	.01	.01	[-.01, .02]
Tenure	.03	.03	[-.04, .10]
Sibship size	.01	.03	[-.05, .06]
R <sup>2</sup>	.14		
F-ratio	(6.00, 294.00) 7.63, p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*:  $p < .05$ ; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable; Y= dependent variable

**Output 3.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating the total effect of Negative Sibling Relationship on Team Functioning at the Social Reflexivity Level (controlled for age, gender, tenure and sibship size)

N=301			
Social Reflexivity (Y)			
	<i>B</i>	<i>SE</i>	95% CI
Constant	4.10***	.28	[3.56, 4.64]
Negative Sibling Relationship (X)	-.17*	.07	[-.30, -.03]
Gender	-.17*	.09	[-.34, -.01]
Age	.01	.01	[-.01, .02]
Tenure	.03	.03	[-.04, .10]
Sibship size	.01	.03	[-.05, .06]
R <sup>2</sup>	.06		
F-ratio	(5.00, 295.00) 3.78 p=.0024		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; \*:  $p < .05$ ; X= independent variable; Y= dependent variable

**Output 4.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating direct and indirect effects of a Negative Sibling Relationship on Team Functioning at the Social Reflexivity Level (controlling FWE)

N=301			
Negative Sibling Relationship on Social Reflexivity (controlling FWE)			
	<i>Effect</i>	<i>SE</i>	95% CI
Direct Effect	-.14	.07	[-.27, -.01]
Indirect Effect	-.03	.02	[-.06, .01]

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero.



## APPENDIX J

---

**Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a negative sibling relationship (X) and task reflexivity (Y) (controlled for age, gender, tenure and sibship size)**

**Appendix J.** Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a negative sibling relationship (X) and task reflexivity (Y) (controlled for age, gender, tenure and sibship size)

**Output 1.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Negative Sibling Relationship on FWE (controlled for age, gender, tenure and sibship size)

N=301			
	FWE (M)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	4.51***	.26	[3.99, 5.03]
Negative Sibling Relationship (X)	-.08	.07	[-.22, .05]
Gender	-.03	.08	[-.19, .14]
Age	-.01	.01	[-.02, .01]
Tenure	.00	.03	[-.06, .07]
Sibship size	.02	.03	[-.04, .07]
R <sup>2</sup>	.02		
F-ratio	(5.00, 295.00) 1.26, p=.28		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable

**Output 2.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) (in parentheses) estimating Team functioning at the Task Reflexivity Level as a FWE outcome (controlled for gender, age, tenure and sibship size)

N=301			
	Task Reflexivity (Y)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	2.07***	.38	[1.30, 2.82]
FWE (M)	.36***	.06	[.24, .48]
Gender	-.05	.09	[-.22, .11]
Age	.01	.01	[-.01, .02]
Tenure	.06	.03	[-.01, .13]
Sibship size	.05	.03	[-.01, .10]
R <sup>2</sup>	.16		
F-ratio	(6.00, 294.00) 7.63, p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable; Y= dependent variable

**Output 3.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating the total effect of Negative Sibling Relationship on Team Functioning at the Task Reflexivity Level (controlled for age, gender, tenure and sibship size)

N=301			
Task Reflexivity (Y)			
	<i>B</i>	<i>SE</i>	95% CI
Constant	3.68***	.29	[3.10, 4.25]
Negative Sibling Relationship (X)	-.15*	.07	[-.30, -.01]
Gender	-.06	.10	[-.24, .12]
Age	-.01	.01	[-.02, .01]
Tenure	.06	.04	[-.01, .13]
Sibship size	.05	.03	[-.01, .11]
R <sup>2</sup>	.06		
F-ratio	(5.00, 295.00) 3.54 p=.0040		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; \*\*:  $p < .01$ ; \*:  $p < .05$ ; X= independent variable; Y= dependent variable

**Output 4.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating direct and indirect effects of a Negative Sibling Relationship on Team Functioning at the Task Reflexivity Level (controlling FWE)

N=301			
Negative Sibling Relationship on Task Reflexivity (controlling <i>FWE</i> )			
	<i>Effect</i>	<i>SE</i>	95% CI
Direct Effect	-.12	.07	[-.26, .02]
Indirect Effect	-.03	.02	[-.08, .01]

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero.

## APPENDIX K

---

**Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a negative sibling relationship (X) and affective commitment (Y) (controlled for age, gender, tenure and sibship size)**

**Appendix K.** Regression coefficients (95% confidence intervals) estimating the mediator role of FWE (M) between a negative sibling relationship (X) and affective commitment(Y) (controlled for age, gender, tenure and sibship size)

**Output 1.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating Negative Sibling Relationship on FWE (controlled for age, gender, tenure and sibship size)

N=301			
	FWE (M)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	4.51***	.26	[3.99, 5.03]
Negative Sibling Relationship (X)	-.08	.07	[-.22, .05]
Gender	-.03	.08	[-.19, .14]
Age	-.01	.01	[-.02, .01]
Tenure	.00	.03	[-.06, .07]
Sibship size	.02	.03	[-.04, .07]
R <sup>2</sup>	.02		
F-ratio	(5.00, 295.00) 1.26, p=.28		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable

**Output 2.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) (in parentheses) estimating Affective Commitment as a FWE outcome (controlled for gender, age, tenure and sibship size)

N=301			
	Affective Commitment (Y)		
	<i>B</i>	<i>SE</i>	95% CI
Constant	2.66***	.43	[1.80, 3.51]
FWE (M)	.52***	.07	[.38, .65]
Gender	.04	.10	[-.15, .23]
Age	.01	.01	[-.01, .03]
Tenure	.11**	.03	[.02, .18]
Sibship size	.01	.03	[-.05, .07]
R <sup>2</sup>	.27		
F-ratio	(6.00, 294.00) 7.63, p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*:  $p < .01$ ; \*\*\*:  $p < .001$ ; M= mediator variable; X= independent variable; Y= dependent variable

**Output 3.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating the total effect of a Negative Sibling Relationship on Affective Commitment (controlled for age, gender, tenure and sibship size)

N=301			
Affective Commitment (Y)			
	<i>B</i>	<i>SE</i>	95% CI
Constant	4.99***	.34	[4.33, 5.65]
Negative Sibling Relationship (X)	-.03	.09	[-.20, .14]
Gender	.03	.10	[-.18, .23]
Age	.01	.01	[-.01, .03]
Tenure	.11*	.04	[.03, .19]
Sibship size	.02	.04	[-.05, .07]
R <sup>2</sup>	.13		
F-ratio	(8.57, 5.00) 8.57 p=.0000		

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero; \*\*\*:  $p < .001$ ; \*:  $p < .05$ ; X= independent variable; Y= dependent variable

**Output 4.** Regression coefficients (B) with Standard Errors (SE) and 95% confidence intervals (CI) estimating direct and indirect effects of a Negative Sibling Relationship on Affective Commitment (controlling FWE)

N=301			
Negative Sibling Relationship on Affective Commitment (controlling <i>FWE</i> )			
	<i>Effect</i>	<i>SE</i>	95% CI
Direct Effect	-.01	.08	[-.14, .17]
Indirect Effect	-.04	.03	[-.11, .02]

Note: effects are significant when the upper and lower bound of the bias corrected 95% confidence intervals (CI) does not contain zero.